

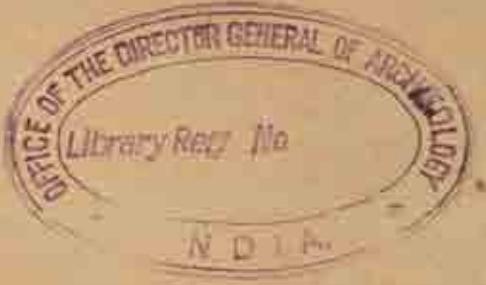
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M. Larougey

MEMOIR
OF A
MAP OF HINDOOSTAN;

OR THE
MOGUL EMPIRE.

WITH

AN INTRODUCTION, ILLUSTRATIVE OF THE GEOGRAPHY AND PRESENT
DIVISION OF THAT COUNTRY:

AND
A MAP OF THE COUNTRIES SITUATED BETWEEN THE HEADS OF
THE INDIAN RIVERS, AND THE CASPIAN SEA.

13021

A150.

A SUPPLEMENTARY MAP,

Containing the improved Geography of the Countries contiguous to the Heads of the Indus.

BY JAMES RENNELL, F. R. S.

LATE MAJOR OF ENGINEERS, AND SURVEYOR-GENERAL IN BENGAL.

The flow's and change
Of many provinces long bound in bonds,
From ALEXANDRA, from CARACAS,
And MARCHESA, to the HYDORIAN TIGRIS
Of Caucasus,
From SAMARIA to OXUS, Tigris's throne,
To ALEX AND LAOS of Gobi; Mogul,
Down to the golden CHAMBERLAIN,
And almost India's Tigris.

MILTON.



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TO WHICH IS ADDED,

AN APPENDIX, CONTAINING AN ACCOUNT OF THE GANGES AND
BURRAMPOOTER RIVERS.

THE THIRD EDITION.

WITH A SECOND SUPPLEMENTARY MAP,
CONTAINING THE NEW GEOGRAPHY OF THE PENINSULA OF INDIA;
AND AN EXPLANATORY MEMOIR.

46515
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LONDON;

PRINTED BY W. BULMER AND CO.

FOR THE AUTHOR, AND SOLD BY G. NICOL, BOOKSELLER TO HIS MAJESTY'S POST-MAIL.
MDCCXCIII.

1793

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TO
SIR JOSEPH BANKS, BART.
PRESIDENT OF THE ROYAL SOCIETY, &c. &c.

THIS ATTEMPT
TO IMPROVE THE GEOGRAPHY OF INDIA,
AND THE NEIGHBOURING COUNTRIES,
IS INSCRIBED,
BY HIS MUCH OBLIGED, AND
FAITHFUL FRIEND AND SERVANT,

J. RENNELL.



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PREFACE

TO THE FIRST EDITION.



As almost every particular relating to HINDOOSTAN, is become an object of popular curiosity, it can hardly be deemed superfluous to lay before the Public an improved System of its Geography. Indeed, the flattering reception that was given to my former work, on the same subject, has, in a manner, made that an object of duty, which was originally an object of choice: for the public having condescended to receive the imperfect information afforded them in 1782, I felt an indispensable obligation on me to render that information more perfect, whenever I might possess the means of accomplishing it. I hesitated only at the measure of subjecting them to an additional tax, so recently after the payment of the former one.

A large collection of materials of various kinds, having been added to my former stock, I have been enabled to produce a work of a more perfect kind than the former; and have therefore drawn it on a larger scale: the surface of the present Map, exceeding that of the former one, in the proportion of 2 and a quarter to 1. The scale of this Map, is one inch and a half to an equatorial degree: and the quantity of land represented in it, is about equal to one half of Europe. It is contained in four large sheets,

PREFACE.

which may either be joined together for the purpose of bringing the whole into one point of view, or bound up separately, in an Atlas; as may suit the fancy or convenience of the purchaser.

By the aid of a series of observations of latitude and longitude, taken by Capt. Huddart, along the Malabar coast, or western coast of India, the form of the peninsula, &c. is now brought very near to the truth: and the eastern coast, by the observations of Col. Pearse, is much improved, in the distribution of its parts, although its general form has undergone but little alteration. A measured line has also been drawn from the Bengal provinces to Nagpour, in the very centre of India: which has not only established an important geographical point, in a part where it was most wanted; but has been the means of furnishing a great deal of matter towards filling up the vacant intervals on three sides of that point. Lastly, the war with Hyder Ally and Tippoo Sultan, his successor, has produced much new geographical matter, in various parts of the peninsula, by the marches of the different armies, and their detachments; particularly that of Col. Fullarton, in the southern provinces and Coimbettore. These are the most material acquisitions to the present Map, as they, in effect regulate a considerable part of the general outline, and determine the proportions of some of the principal members of it. But of the kind of materials, which without affecting the general proportions of the Map, serve the purpose of filling up the void spaces in it, there will be found very great abundance. In particular, Guzerat, and the Rajpoot provinces, have undergone very

considerable improvement; as well as the Panjab country and Sindy. The upper part of the course of the Ganges, to the cow's mouth, or cavern through which the Ganges passes; and the course of the Gogra river to its fountains; are both inserted from the work of M. Bernoulli. In short, additions and corrections are disseminated over the whole map: and, in general, if we except the south part of Berar, the western part of the peninsula, and the countries bordering on the river Indus, and the Panjab, the Map is filled up in such a degree, as to have no considerable blanks in it.

As Mr. Forster's route from India to Russia furnished some new ideas, and elucidated many former passages, I judged it proper to express his route to the Caspian sea, on a separate map; and at the same time to add to it, the countries contiguous to Hindoostan on the north and north-west; so as to include Samarcand, and the marches of Alexander from the borders of the Caspian sea, to the river Jaxartes (the modern Sihon, or Sirr).

In the division of HINDOOSTAN into soubahs, &c. I have followed the mode adopted by the Emperor ACRAB, as it appears to me to be the most permanent one: for the ideas of the boundaries are not only impressed on the minds of the natives by tradition, but are also ascertained in the AYIN ACRABEE; a register of the highest authority. But for the lower parts of the DECCAN, and the peninsula in general, this standard being wanting, I had recourse to the best information I could get, which was not, indeed,

of the most perfect kind : and therefore I directed my attention principally to the state of the modern divisions in those quarters ; the impressing a clear idea of which, is one principal aim of the work.

It must be observed, that since the empire has been dismembered, a new division of its provinces has also taken place ; by which means, some soubahs now form a part of the dominions of three or more princes ; and very few are preserved entire. These modern divisions are not only distinguished in the Map by the names of the present possessors ; but the colouring also is entirely employed in facilitating the distinctions between them. So that the modern divisions appear, as it were, in the *fore ground* ; and the ancient ones in the *back ground* ; one illustrating and explaining the other.

Considering the vast extent of India, and how little its interior parts have been visited by Europeans, till the latter part of the last century, it ought rather to surprise us, that so much geographical matter should be collected during so short a period ; especially where so little has been contributed towards it by the natives themselves, as in the present case. Indeed, we must not go much farther back than thirty-five years, for the matter that forms the basis of this Map. And it must not be forgotten, that the East-India Company have caused a mathematical survey to be made, at their own expence, of a tract equal in extent to France and England taken together ; besides tracing the outline

of near 2000 miles of sea coast, and a chain of islands in extent 500 miles more.*

In general, I have acknowledged in the course of the Memoir, the assistance that I have received from the different Gentlemen, who have obligingly furnished me with the materials, therein discussed. But there were other kinds of assistance afforded, where no opportunities of acknowledgment occurred; such as the furnishing of useful hints, and correcting of errors, into which I had unavoidably fallen, through ignorance of local circumstances, or historical facts; or misconceptions of the meaning of authors, whom I had consulted. The Gentlemen to whom I stand particularly indebted on this score, are, Mr. Francis Russell, Mr. David Anderson, and Mr. James Anderson;† Capt. Jonathan Scott,

* Whatever charges may be imputable to the Managers for the Company, the neglect of useful Science, however, is not among the number. The employing of Geographers, and Surveying Pilots in India; and the providing of astronomical instruments, and the holding out of encouragement to such as should use them; indicate, at least, a spirit somewhat above the mere consideration of Gain: but above all, the establishment of an office at home, for the improvement of hydrography and navigation, and their judicious choice of a superintendent for it, reflects the highest honour on their administration; and ought to convince us, that in a free country, a body of subjects may accomplish, what the State itself despairs even to attempt. For, however surprising it may appear, it is nevertheless true, that the first maritime nation in the world, has no good chart to direct its fleet towards its own coasts; nor even a criterion, by which the public may be enabled to judge, of the merit of any hydrographical production whatsoever. So that the soundings on the coast of Bengal, are better known than those in the British Channel; of which, no tolerable chart exists, even at this day. During the late war, an East-India ship owed her safety to the knowledge obtained from a chart of the mouths of the Ganges (made, and published by order of the Company) into one of which she escaped from two French cruisers, and afterwards came into the Hoogly river by the inland navigation. We had just become masters of the hydrography of America, when we lost the sovereignty of it. I hope no one will think ominously of our Indian possessions from this circumstance: but even if he does, he may make himself easy on the score of Great Britain.

† To Mr. James Anderson, I am, in particular, indebted, for the account of the derivation of the term MAHARATTA, and for that of the ancestry of Sevajee: as also for the

Mr. Wilkins, Mr. Middleton, Col. Popham, and the late Col. Camac; all of the Bengal establishment: Mr. Bensley, and Mr. Inglis, both of the East-India direction: Mr. Marsden, Mr. John Sullivan, and Mr. Callander; severally of the establishments of Fort Marlborough, Madras, and Bombay: and Mr. Dryander.

To Lord Mulgrave I am indebted for a copy of Mr. Forster's route from Jummoo to the Caspian sea: as well as for his Lordship's very ready communication of every species of information, that could be of service to the work in question.

The routes of Mr. Smith, and of General Goddard across the continent, from the Jumnah river to Poonah and Surat, contain much useful matter; and have been the means of determining a number of geographical points.

A MS. account of the country of the Rajpoots, and other provinces, on the south, and S W of Agra; together with a map, both of them composed by P. Wendell, in 1779, were of very great use in describing the geography of those parts. And to render the MS. more valuable, there has been added to it, Mr. James Anderson's account of the changes that have taken place since that period, in consequence of Sindia's attacks, and negotia-

subject matter of the notes that accompany those articles. And to him, and to his brother, Mr. David Anderson (each of whom, at different times, resided in a public capacity with Madajee Sindia) I owe the most valuable part of the information, respecting the geographical division of the Mahratta States, and their tributaries.

tions. The former was communicated by Col. Popham, and the latter by the Right Hon. Charles Greville.

Mr. Dalrymple, to whom I made my acknowledgments for the assistance afforded me, in the course of my former work, has, on the present occasion, not only procured for me every new material that fell under his notice, but instructed me how to procure others, and to draw information from various sources, that I was before ignorant of. To his valuable, and perhaps unequalled, collection of MS. charts, and of voyages and travels, I have also had access, on all occasions; and I wish to be understood to speak with the utmost sincerity, when I say, that without this assistance, my performance must have been extremely imperfect: or in other words, that Mr. Dalrymple is entitled to the thanks of the public, in a positive degree; although my share of those thanks, may be only comparative.

Although the new translation of the *AYIN ACBAREE* may have in part superseded the value of the extracts furnished me on the former occasion by Sir Charles Boughton Rouse; as the translation contains the whole subject in a connected form; and was also a task which none but a person who devoted his whole time to it, could effect; yet I am by no means unmindful of my former obligations to this Gentleman.

I have borrowed, largely, from M. D'Apres' *New Neptune Orientale*, for the sea coasts and islands; and also, though in a

smaller degree, from M. D'Anville's maps of Asia and India published in 1751 and 1752. When it is considered that this excellent Geographer had scarcely any materials to work on for the inland parts of India, but some vague itineraries, and books of travels, one is really astonished to find them so well described as they are. It is with regret that I find myself obliged to differ in opinion from him concerning some positions in ancient Geography: I mean, that of Palibothra, in particular; and some few others. I have generally avoided all disquisitions of this kind, from a conviction of the general obscurity of the subject; and which even an intimate knowledge of the Indian languages would not enable me to clear up: for the similitude between ancient and modern names, is very fallacious, unless strongly corroborated by situation. But we cannot well refuse our assent to the opinion that Ptolemy meant the *Suttuluz*, or *Setlege* by the *Zaradrus*; the *Rauvee* by the *Rbuadis*, or *Adaris*; and the *Chunaub* by the *Sandabalis*: because not only the names, but the positions have an affinity to each other. And yet this is a part of Ptolemy, which M. D'Anville discredits the most: but the reason was, that M. D'Anville himself was unacquainted with the true names of those rivers.

M. Bussy's marches in the Deccan afford *data* for fixing the positions of many capital places there; particularly Hyderabad, Aurungabad, Bisnagur and Sanore. But still there are plans of some of his marches wanting, which, could they be procured, would throw much light on the geography of the peninsula,

and the Deccan: such as that from Pondicherry to Cuddapah, Adoni, and Hydrabad; that from Aurungabad to Nagpour; and the campaign towards Poonah. There are also existing, itineraries kept by very intelligent people, who have travelled from Pondicherry, direct to Delhi; but I know not how to set about procuring them. The public records at Goa, I am informed, contain a vast fund of geographical knowledge; and yet we are more in the dark, concerning the country on that side of the peninsula, than we are with respect to the centre of the Deccan.

Could the whole mass of geographical matter that respects India (much of which, is probably in the hands of people who are ignorant of its value) be collected, I make no doubt but that very complete maps of the several provinces of it, might be constructed, on scales large enough for any ordinary purpose.

It is intended by this Memoir to particularize the several authorities from whence the positions in the Map are drawn; together with the manner of comparing them, in cases where they disagreed; as also the manner of combining them, when more than one circumstance was required to establish a position. By this means, the authority for each particular, may be known to those who have curiosity enough to inquire after it; and the defective parts being thus pointed out, some future Geographer may be stimulated to seek for better materials. It may also tempt those who are already in posseſſion of such materials, when they are apprised of their use, to contribute them to the public stock. Any

communications of the kind will be thankfully received ; and a proper use made of them.

There will be found, at the end of the work, distinct Indexes, referring to the matter of the Memoir, and to the names of countries and places in the Map. The great waste of time occasioned by searching after particular situations, in maps of any extent, renders an index as necessary an appendage to a large map, as to a large book. For an index will, in the first instance, inform the reader whether the place sought after, be in the map, or not. If in the map, he is directed to it with as much facility, as to a passage in a book, from an ordinary index. And if it be not there, although he may, indeed, blame the map for its deficiency, he must allow that it does not rob him of his time, by encouraging fruitless researches. There are also added, Tables of Distances between the principal cities and towns of Hindoostan ; and a small map, which brings into one view the respective positions of all the places mentioned in the Tables.

As there does not exist at present, under any form whatsoever, a connected abstract of Indian history, it is a very difficult task for any reader, although possessed of inclination and leisure, to make himself acquainted with the principal events that form the ground-work of the history of that country : and particularly those which laid the foundation of the British power there. The many valuable tracts on this subject, that have appeared at different times, are so disjointed in point of chronology,

that no idea of general history can be obtained from them: nor can the chasms be readily filled up. I have therefore been tempted to compile a sort of chronological table of events, from the era of the first Mahomedan conquests, to the final dissolution of the Mogul empire: and wish the reader to understand, that what is offered to his perusal under that form, is intended as a mere sketch; and that, chiefly with a view to render so dry and so unentertaining a subject as the geography of a country, somewhat more interesting, by accompanying it with an account of the principal events and revolutions, to which the country has given birth. I am but too conscious of the deficiency of this part of my performance. Besides, many of the events are related so differently by different people, who pretend to an equal knowledge of the circumstances of them, that it will be no matter of surprise if I am found (by those whose knowledge of eastern languages has gained them access to authentic records) to be often mistaken. In whatsoever case this may happen, I make no doubt but that I shall experience the exercise of their candour, as to the motives by which I was actuated, when I adopted any particular opinion, or mode of relation. The present disputes concerning some recent historical facts in this and the neighbouring countries, shew how extremely difficult it is to come at the truth, even when the researches after it, are made under every favourable circumstance that can possibly attend them.

PREFACE TO THE SECOND EDITION.

SINCE the publication of the first edition, much valuable matter, serving both to correct, and to extend, the geography of India, and the countries bordering on it, to the north-west ; has been transmitted to me. I have, in consequence, inserted in the body of the Map, such of the new matter, as it was possible to assimilate with the old ; namely, Capt. Reynolds's route through Malwa ; and from Surat to Tippoo's frontier, through Baglana, and the western part of the Deccan. But on the north-west of Delhi, the new materials not only differed as widely from the old, as they excelled them in point of authority ; but were also extended through a tract, far beyond the limits of the General Map : so that the corrections could no otherwise be accomplished with effect, than by inserting them in a separate map. Accordingly, a new map, on a scale similar to that of the General one, and forming an appendage, or supplement to it ; has been constructed : and contains generally, the countries situated between Delhi, Candahar, Badakshan, and the two Thibets : including, of course, all the upper branches of the Indus, and the valley of Cashmere. This new piece of geography (with the exception of that part of it, between Delhi and the Panjab) has been formed of materials most oblig-

ingly communicated by Capt. Kirkpatrick, of the Bengal establishment; and of which materials, a detailed account will be found in its place. And the part which forms the exception, is taken from a MS. map, as obligingly communicated by Colonel Polier: and which is no less valuable, from its supplying the deficiency of the other materials, than from the importance, and novelty of its subject.

Having detected a very considerable error, in the relative positions of the two Bucharias, as they stand in our best maps; and having also made a great alteration in the course of the principal branch of the Indus, towards its source; I have re-constructed the map of the countries, situated between the Ganges and the Caspian sea, in order to correct these errors, and to insert other positions, founded on the result of much investigation and inquiry. For the accommodation of the purchasers of the first edition, these additional Maps, as well as the letter-prefs of the Third Section, which relates to them; will be sold separately.

Having been formerly misled, by Mr. Tiefentaller's representation of the course of the Ganges, between Hurdwar and Sirinagur; I have now corrected it, according to the report of some English gentlemen, whose curiosity led them to the foot of mount *Himaleb*. As Mr. Daniel was amongst the number, we may expect to receive from his pencil, correct drawings of the lower fall of the Ganges (at Hurdwar), and of the romantic scenes in its neighbourhood.

PREFACE TO THE THIRD EDITION.

THE present edition, both of the Memoir and Map, does not differ in any respect, from the last. But since the Memoir was printed, very great changes have taken place, in the political division of the Peninsula of India: and the late war, which gave occasion to this change, has produced a great many valuable materials, for correcting the natural, as well as the political, geography of the Peninsula. A new, and much improved Map of this tract, has therefore been constructed; in the course of which, all the new authorities have been consulted: and it is accompanied by a short Memoir, explanatory of the construction, and political consequence, of the tract represented. This new piece, is in its nature, an appendage to the Memoir of the Map of Hindoostan: and the letter-prefs of both, being printed uniformly, may conveniently be bound up together, by those who choose it: but the Map, from its size, cannot very conveniently be folded into the book.

A further number of copies, of the Third Section, and of the two Maps belonging to it, have been printed, for the accommodation of the purchasers of the first edition of this work.

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EXPLANATION OF THE COLOURING OF THE MAP.

The Colours are used to point out the Boundaries of the principal States now existing in Hindoostan; and these are divided into six Classes, *viz.*

CLASS I.	The BRITISH POSSESSIONS; or those of the EAST INDIA COMPANY, distinguished by	—	—	—	RED.
II.	The POWERS in ALLIANCE with the COMPANY, by YELLOW.	—	—	—	
III.	The MAHARATTA STATES, by	—	—	—	GREEN.
IV.	The NIZAM'S Territories, by	—	—	—	ORANGE.
V.	TIPPOO SULTAN'S, by	—	—	—	PURPLE.
VI.	The SEIKHS, by	—	—	—	BLUE.

The following are the Territories comprised in each Class.

I. BRITISH POSSESSIONS.—RED.

- 1 Bengal and Bahar, with the Zemindary of Benares.
- 2 Northern Circars, including Guntur.
- 3 Barra-Mahal, and Dindigul.
- 4 Jaghire in the Carnatic.
- 5 The Calicut, Palicaud, and Coorga countries.

II. BRITISH ALLIES.—YELLOW.

- 1 Azuph Dowlah. Oude.
- 2 Mahomed Ally. Carnatic.
- 3 Travancore, and Cochin.

* The countries thus marked, are acquisitions from Tippoo Sultan, under the late treaty of Seringapatam, 1792.

The final Partition of Tippoo's Territories having taken place in 1799, the Districts allotted by the different Treaties, are complete 1792 & 1799.

III. MARRATTA STATES.—GREEN.

Deep GREEN.

POONAH Mahrattas.	TRIBUTARIES.
1 Maiwa.	1 Rajah of Jyenagur.
2 Candesh.	2 ——— Joodpour.
3 Part of Amednagur or Dowlatabad.	3 ——— Oudipour.
4 Visiavpur.	4 ——— Narwah.
5 Part of Guzerat.	5 ——— Gohud.
6 —— Agra.	6 Part of Bundelcund.
7 —— Agimere.	7 Mahomed Hyat. Bopaltol.
8 Allahabad.	8 Fatty Sing. Amedabed.
* 9 Shanoor, or Sanore-Bancapour; Darwar; &c. situated in the Dooab, or country between the Kistnah and Toombuddra rivers.	9 Gurry Mundella, &c. &c.

Light GREEN.

BERAR Mahrattas.	TRIBUTARY.
1 Berar.	Bembajee.
2 Orissa.	

IV. NIZAM-ALLY, Soubah of the DECCAN.—ORANGE.

1 Golconda.	* 6 Cuddapah, Cumnum (or Combam) and Gandicotta (or Ganjecotta).
2 Aurungabad.	* 7 Part of Gooty, Adoni, and Cannoul.
3 Bedler.	* 8 Part of the Dooab.
4 Part of Berar.	
5 —— Adoni, Rachore and Cannoul.	

V. TIPPOO SULTAN.—PURPLE.

1 Mysore.	5 Canhara.
2 Seri.	6 Soonda.
3 Chiteldroog.	7 Herpanelly.
4 Bednore.	8 Annagoondy.

* Late acquisitions from Tipoo Sultan.

- 9 Part of Gooty.
 10 Gurramconda.
 11 Colar.

- 12 Bangalore.
 13 Coimbeittore.

N. B. The cessions made by Tippoo, to the British, the Poonah Mahrattas, and the Nizam, are marked by dotted lines of the colours, respectively appropriated to each of the three states.

VI. SEIKS.—BLUE.

Lahore, Moultan, and the western parts of Delhi.

SMALL STATES, not distinguished by Colours.

- 1 Successors of Zabeda Cawn. Schaurumpour.
- 2 Jats.
- 3 Pattan Rohillas. Furruckabad.
- 4 Adjid Sing. Rewah, &c.
- 5 Bundelcund, or Bundela.
- 6 Little Ballogistan.

ERRATA.

INTRODUCTION.

- Page lxxxi, line 10 from bottom, after *Tanjore*—See also the Memoir of the Map of the Peninsula, page 21, 22.
—cxxxvii, l. 3—read *Mabratnas*.
—cxxxviii, l. 5, “*Deccan, Payen Gant*,” This is a mistake: the Deccan had its *Balls*, and *Payen Gant*, likewise. See Memoir of the Map of the Peninsula, page 14.
—cxxxvii, “*Carnatic*”. See a better definition of it, in Mem. Peninsula, p. 19, 20, 25.
—cxxxix, “*Revenue of Tippoo*”. See Mem. Peninsula page 35, *et seqq.*

MEMOIR.

- Page 258, l. 12 “*Gauti*”. More particulars concerning them, will be found in Mem. Penin., p. 14, 15, 16.
—282, l. 5, and throughout the Memoir, read, *Gandicotta*, or *Ganjcotta*.
—283, l. 1—read *Chandegheri*.
—285, l. 12—read *Combam*, or *Cumvant*.
—286, “*Canvel*”. See also Mem. Penin., p. 10.
—287, “*Rachard*”. This name is also written *Ryddoor*.
—289, l. 8 “*Gondegam*”. This river in Capt. Beaton’s Map, is called *Ganta-cum-mum*.
—290, l. 7 from bottom, “*Sanore*”. It is also called *Spanoor*.
—291, l. 13, “*Bijimangur*”. This name is also written *Besjanuggur*. See Mem. Pen., p. 40, *et seq.*, both for the name, and for the remains of the city.
—312, l. 10—delete the *a*.
—330. From *Seringapatam* to *Bangalore*—read, 80 miles.
—ib. To *Calicut*—read, 122 miles.
—ib. To *Mangalore*—read, 150 miles.
—ib. To *Tellicherry*—read, 112 miles.

INDEX.

Article *Ballagant*, read cxxviil.

For *Elliot*, read *Eliot*.

Article *Gantoor*—read, since the first publication, *etc.*

—*Hindoostan*—read, *Its extent compared with certain countries of Europe*.

For *Holland*—read *Hollond*.

GENERAL MAP.

In square E 1, for *Mebindry*—read *Sabermatly*, river.

INTRODUCTION.

HINDOOSTAN, has by the people of modern Europe, been understood to mean the tract situated between the rivers Ganges and Indus, on the east and west; the Thibetian and Tartarian mountains, on the north; and the sea on the south. But strictly speaking, the extent of Hindoostan is much more circumscribed, than these limits convey an idea of: and the name ought to be applied only to that part of the above tract, which lies to the north of the parallels of 21° or 22° . The Nerbuddah river is, indeed, the reputed southern boundary of Hindoostan, as far as it goes; and the southern frontiers of Bengal and Bahar compose the remainder of it. The countries on the south of this line, according to the Indian geographers, go under the general name of DECCAN; and comprise nearly one half of the tract generally known by the name of the Mogul empire. But as the term HINDOOSTAN has been applied in a lax sense to this whole region, it may be necessary to distinguish the northern part of it, by the name of Hindoostan *proper*. This tract has indeed the Indus, and the mountains of Thibet and Tartary, for its western and northern boundaries: but the Ganges was improperly applied as an eastern boundary: as it intersects in its course, some of the richest provinces of the empire: while the Burrampooter, which is much nearer the mark as an eastern boundary, was utterly unknown. In this circumscribed state, the extent of Hindoostan *proper*, is about equal to France, Germany, Bohemia, Hungary, Switzerland, Italy, and the Low Countries, collectively: and the Deccan and peninsula, are about equal to the British

Islands, Spain, and Turkey in Europe. I have here called the tract which lies to the south of the Kistnah river, the peninsula; in conformity to general practice; although its form does by no means warrant it. The term DECCAN, which signifies the south, is applied (as before said) in its most extensive signification, to the whole region that lies on the south of Hindooostan *proper*. I apprehend, however, that in its proper and limited sense, it means only the countries situated between Hindooostan *proper*, the Carnatic, the western sea, and Orissa: that is, the provinces of Can-deish, Dowlatabad, Visiapore, Golconda, and the western part of Berar.

The term INDIA, by which this country, as far as it was known, is distinguished in the earliest Grecian histories, appears to be derived from HIND, the name given it by the ancient Persians; through whom, doubtless, the knowledge both of the country and its name, were transmitted to the Greeks. We have the strongest assurances from Mr. Wilkins, that no such words as HINDOO, or HINDOOSTAN, are to be found in the Sanscrit Dictionary. It appears that the people among whom the Sanscrit language was vernacular, styled their country BHARATA;* a name which is, I believe, quite novel to the ears of the learned in Europe. It is probable then, that the word HIND furnished that of INDIA to the Greeks; and the termination STAN, signifying country in the Persic, is of more modern date: for we find it joined to many of the ancient Persian names of countries; as to Dahæ, whence Dahestan;

* See the notes to the *Hectopades*, recently translated from the Sanscrit (or Sanscree), by Mr. Wilkins, page 332. This gentleman has the merit of being the first European who acquired the knowledge of the Sanscrit language: which was that of ancient Hindooostan (or Bharata), but which ceased to be the vernacular tongue, soon after the Mahomedan conquest, in the 11th century. A few years ago it was known only to the Pandits or learned Brahmins; who religiously kept it from the knowledge of all but their own order: it being the sacred depositary of their religious institutions, and mysteries, and which it was inconvenient to communicate to the vulgar, otherwise than through the medium of their own commentaries, and interpretations. The humour done Mr. WILKINS on this occasion, reminds us of the communications made to HEROPOTUS, by the Egyptian priests; and it is a fair inference, that the personal merit of both of these men, had a principal share in obtaining so distinguished a preference.

Tapuri, Taberi-stan; and Corduene, Curdi-stan; together with many others. It has happened in the application of this name, INDIA, as on similar occasions; that is to say, it has been applied, not only to the country originally designed by it, but to others adjacent to, and beyond it: * for the countries between Hindoostan and China, came to be called the *further India*; or India *extra Gangem*: whereas, Hind, or India, properly belonged only to the country of the people called Hindoos; or those of India *intra Gangem*. The name is as ancient as the earliest profane history extant: and this may serve, among many other instances, to prove the high antiquity of the Persian language.

India has in all ages excited the attention of the curious, in almost every walk of life. Its rare products and manufactures, engaged that of the merchants, while the mild and inoffensive religion of Brahma, and the manners inculcated by it, attracted the notice of philosophers. The structure of its language too, is remarkable; and has a claim to originality. It had been happy for the Indians, if they had not attracted the notice of a class of men more inimical to the happiness of mankind: for the softness and effeminacy induced by the climate, and the yielding nature of the soil, which produces almost spontaneously, invited the attacks of their more hardy neighbours; and rendered them an easy prey to every foreign invader. Hence we find them successively conquered by the Persians, Patans, and Moguls: and it is probable, that, like the Chinese, they have seldom had a dynasty of kings, from among their own countrymen. The accounts of 22 centuries ago, represent the Indians as a people who stood very high in point of civilization: but to judge from their ancient monuments, they had not

* The term LYRIA belonged at first only to the countries of Africa that were colonized by the Greeks; but was afterwards applied by them to the whole continent. The Romans, in a similar manner, extended the name of ASIA, which originally belonged only to the territories of Carthage, to the whole continent; or, at least, to so much as they knew of it. ASIA was applied at first only to Naxolia; which took the name of LESSER ASIA, afterwards, when ASIA was applied to all the known parts of that continent.

carried the imitative arts to any thing like the degree of perfection attained by the Greeks and Romans; or even by the Egyptians. Both the Hindoos and Chinese appear to have carried the arts just to the point requisite for useful purposes; but never to have approached the summit of perfection, as it respects taste, or boldness of design.

The principal monuments of Hindoo superstition are found in the peninsula. Some have concluded from this, and from other circumstances, that the original seat of the Hindoo religion was there. Others, perhaps with more appearance of probability, suppose it to have originated on the banks of the Ganges. Monuments of a superstition, apparently anterior to the Hindoo, exist in the caves of Salsette and Elephanta, two islands on the western coast of India: these consist of apartments of extensive dimensions, excavated from the live rock, and decorated with figures and columns.

India was but little known to the Greeks until Alexander's expedition, about 327 years before Christ. HERODOTUS, who wrote about 113 years before, appears to have heard but indistinctly of any but the western part of it; and that only, by its being tributary to Persia. He informs us (Book IV.) that Darius Hystaspes had dispatched Scylax of Caryandra to explore the Indus, about 508 years before Christ; and that he departed from *Caspapyrus* and *Pactya*, which were situated near the head of the Indus. Herodotus continues to say, that the Indians who inhabit towards the north, and border on these territories of Caspapyrus and Pactya, resemble the Bactrians (that is, their neighbours) in manners: and are the most valiant people of all India. The eastern part of India, says he, is rendered desert by sands: which description applies only to the country lying east of the Indus, and south of the PANJAB.* and this shews pretty evidently, that Herodotus's knowledge of India, as to particulars, extended no further than to the above tract: and a collateral proof is, that he does not mention

* The country watered by the 5 eastern branches of the Indus. See page 94 of the Memoir.

the Ganges, which became so famous a century afterwards. Indeed, he tells us very plainly, that this sandy desert was the extreme point of his knowledge eastward.

With respect to Scylax's discoveries, this is Herodotus's account. "Darius being desirous to know in what part the Indus (which is the second river that produces crocodiles) runs into the sea, sent Scylax of Caryandra, with others of approved fidelity, to make the discovery. They departed in divers ships from Caspatyrus, and the territories of *Pactya*;"* sailed down the river eastward, to the sea; and then, altering their course to the west, arrived in the goth month, at that place where the King of Egypt (Necho) had caused the Phenicians I mentioned before, to embark, in order to surround the coast of Lybia (Africa). After this voyage, Darius subdued the Indians, and became master of that sea."—HEROD. Book IV. In another place, in the same book, he takes notice of some Indian nations situated to the southward, very remote from the Persian conquests; and whose complexions were as black as Ethiopians; these ought to be the people of the peninsula. He had also learned that they killed no animals, but contented themselves with the produce of the earth: that they exposed those whom they deemed too ill to recover; lived chiefly upon rice; had horses of a smaller breed than their western neighbours; and that they manufactured their fine cotton wool in cloathing.

Now, after the above account of Scylax's expedition, can we give credit to the story of Alexander's supposing that he had discovered the head of the Nile, when he was at the Indus? Are we to suppose that Aristotle concealed the books of Herodotus from his pupil? or, on the contrary, ought we not rather to believe, that the matter of them was on his mind; and that the discoveries of Scylax, made within 180 years of his own time, and of a kind

* I conclude that *Pactya*, is the modern *Pebtely*. See pages 147, and 171 of the Memoir. Some have supposed *Caspatyrus* to mean *Cashmere*: but this is improbable, from its situation, which is remote from the Indus: but *Pebtely*, or *Puckholi*, borders on it.

that particularly interested him, were detailed to him, when we find them given incidentally in Herodotus?

The story of Alexander's surprise at seeing the tides in the Indus, appears to me equally improbable: seeing that the same Herodotus (Book II.) speaks very particularly of the tides in the Red Sea; and describes them as being not only strong, but ebbing and flowing every day. [That most intelligent and ingenious traveller, M. Volney, informs us, that the tide ebbs and flows three feet and a half at Suez.] Arrian takes no notice of the tides until Alexander's fleet had arrived near the mouth of the river. It is true that the tide in the Indus does not go up so high as in other rivers of equal bulk, and that run on so small a descent; but, nevertheless, as the tide is perceptible at 50 or 60 miles above the river's mouth,* we may conclude that it could hardly escape the notice of Alexander and his people, in their voyage from Paitala to the sea; supposing they had not been apprized of the circumstance. Besides, Arrian's account of the coming in of the tide, which did so much mischief to the fleet, is descriptive of the bore, or sudden influx of the tide, in a body of water, elevated above the common surface of the sea; such as occurs in the Ganges, &c. He says, those ships that *lay upon the sand*, were swept away by the fury of the tide; while those that *stuck in the mud*, were set afloat again without damage. To the generality of readers, no reason will appear why the circumstances of the ships should be different, in the mud, and on the sand: the fact is, that the bottoms of channels, in great rivers, are muddy; while their shallows are formed of sand: and it is the nature of the bore to take the shortest cut up a river; instead of following the windings of the channel: consequently, it must cross the sand banks it meets in its way; and it will also prove more destructive to whatever it meets with aground, than what is afloat.

* The tide in the Indus is perceptible at about 65 miles above its mouth; according to the information of Mr. Cullander, who resided a considerable time at Tatta, near the head of the delta of the Indus. In the Ganges the tides are perceptible at 240 miles up; and in the river Amazons, at 600.

It appears also from Herodotus (Book III.), that the parts of India bordering on the Indus, were subjected to regular tribute, if not totally reduced, under the Persian government: for in enumerating the 20 Satrapies of Persia (under Darius Hystaspes), Indi is reckoned one of them, and is rated the highest: it being assessed in the proportion of 4680 Eubean talents of silver, out of 14,560, the whole annual revenue. To explain this, the author informs us, that the Indians were very numerous; and that the tribute charged upon them was proportionably great. It is worthy of remark, that this tribute was paid in gold, whereas that of the other Satrapies was paid in silver. Much light is thrown on this circumstance, by the intelligence furnished by the AVIN ACBAREE; namely, that the eastern branches of the Indus, as well as some other streams that descend from the northern mountains, yield gold dust (See the Index, article *Gold*). We are told on the same occasion, by Herodotus, that gold was estimated about that time, at the value of 13 times its weight in silver.

Alexander's expedition furnished the Greeks with a more extensive knowledge of India: although he traversed only the countries mentioned by Herodotus: that is, the tract watered by the Indus, and its various branches, and adjunct rivers. But the spirit of inquiry was now gone forth; and the long residence of Megasthenes, the ambassador of Seleucus, at *Palibotra*, the capital of the PRASII, furnished the Grecians with the principal part of the accounts of India, that are to be found in Strabo, Pliny, and Arrian: for Megasthenes kept a journal, and also wrote a very particular account of what he had seen and heard, respecting India in general, during several years residence: which account existed in Arrian's time. His embassy was about 300 years before our era.

The communication by land, between the Syrian empire and India was dropt very early; for Bactria soon became independent: and by that means, the link of the chain that connected India with Syria, was broken. The Indian trade was about the same time

transferred from Tyre to Alexandria in Egypt, where it flourished under the auspices of the Ptolemies, until Egypt became a Roman province; and was continued on a more extensive scale under the Romans themselves: nor did it forsake Alexandria, until the *re-discovery* of the passage by the Cape of Good Hope. I shall take occasion to speak more fully concerning the particulars of the navigation from the Red Sea to India, hereafter.

This traffic opened to the Egyptians and Romans a knowledge of the coasts and products of India, as we find by various notices in the abovementioned authors; and in Ptolemy in particular. But considering how much the detail of the coasts was known to him, as is evident by his map (*Tab. X. Asiae*), it is very extraordinary that the general form of it should be so far from the truth: for he makes the coasts between the Indus and Ganges, to project only in a slight curve; whereas, they are known to form the sides of a triangle, whose perpendicular almost equals its base; Cape Comorin being the apex of it. Whoever compares the proportional dimensions of India, found in Diodorus Siculus, Pliny, and Arrian, will find them tolerably just: and will be inclined to think that the worst set of ancient maps of India has travelled down to us: and that Ptolemy, in constructing his map of that part, did not express the ideas of well-informed people of his own time, on that subject. Pliny was about 60 years before Ptolemy; and Arrian about 20 years after Ptolemy: their accounts of the dimensions of India, were taken from *Eratosthenes* and *Megasthenes*.

Diodorus says, that India is 92,000 stadia from north to south, and 28,000 from east to west: that is, the breadth is seven-eighths of the length.

Arrian gives the measures collected by Eratosthenes and Megasthenes; and says, that "India is bounded on the west by the Indus; on the north by a continuation of Mount Taurus, called in different parts, *Paro-pamisus*, *Emodus*, and *Himaus*; and on the south, by the ocean, which also shuts up the eastern parts of

it.* Few authors (says he) have given us any account of the people that inhabit *towards the mouths of the Ganges, where PALIBOTHRA is situated.*"

From the mountains at the head of the Indus, to its mouth, according to Eratosthenes, is 15,000 stadia; and from the said mountains, to the eastern sea, the extent is somewhat less: but as a huge tract of land runs out 4,000 stadia into the sea (meaning the peninsula) it may be reckoned 16,000 stadia. From Palibothra to the western extreme of India, measured along the great road, is 10,000 stadia: and the whole length (that is, from east to west) is 20,000 stadia. Arrian likewise gives the measures according to Megasthenes, who reckoned India 22,300 stadia from north to south; and 16,000 broad, from east to west; making that the breadth, which Eratosthenes reckons the length. We may observe, that Megasthenes's proportion is, on the whole, the truest: for India is about 28 degrees of a great circle in length, from north to south; or from the Indian Caucasus to Cape Comorin: and about 20 in breadth, from the Indus to the mouth of the Ganges: and if we reckon from the most distant mouth of each river, it will be 22 degrees in breadth. This shews that Arrian had as just an idea of the proportional dimensions of India, as we had 40 years ago; for we then reckoned it narrower than the truth by at least two degrees. It is impossible to tell what length Megasthenes meant to express by a stade, as there appears to be so considerable a variation in the length of this itinerary measure, at different times; but by proportioning the number of stades, to the number of degrees, included in the above measures of India by Megasthenes, there should be 800 stades in a degree of a great

* Here it would appear that Arrian followed the geography of Alexander, who supposed India to be the most eastern part of Asia; and that the shore of the ocean, from the mouth of the Ganges, took a quick turn to the north and north-west: for he supposed the Caspian lake to be a gulf of it. [Vide his speech on the banks of the Hyphasis.] But Ptolemy, as we are given to understand, had, before the time of Arrian, described *SOGDICA*, and the borders of *SIVAS*: that is, the countries bordering on the west and NW of *CHINA*; the country of the *ELUTHUS*; and part of *Tartary*.

circle. (M. D'Anville has at different times reckoned 1050; and 1100). I conceive it probable that Megasthenes gave the measures according to the *road distance*, from one extreme of the country to the other; and not according to the horizontal distance, or actual length and breadth of the country. Part of the apparent differences, in the length of the stade, may arise from these different methods of reckoning distances.

Pliny gives the measures along the coasts between the mouth of the Ganges, and *Pattala* (or Tatta) in the mouth of the Indus, at 3320 miles (Roman miles, I suppose, of 1000 paces). The true measure of these coasts, rejecting the sinuosities, and attending only to the general form of it, is 40 degrees of a great circle. M. D'Anville allows 75 Roman miles to a degree; and by this rule, the above number of miles will come out 44 degrees, instead of 40, the true measure. But if the pace be reckoned at 4 feet 10,02 inches, English, there ought to be $78\frac{1}{2}$ Roman miles to a degree; and by this calculation, the 3320 Roman miles will be 42°; or within $\frac{1}{27}$ part of the truth. Whichsoever of the two calculations may be adopted, it is clear that Pliny knew nearly the form of the peninsula; and that Ptolemy, who living at Alexandria, might be supposed to be in the way of obtaining the best information on the subject, was, in truth, ignorant of the general form of it, although he knew so much concerning the particulars.

Arrian's Indian history, which is extremely curious, and merits more notice than it commonly meets with, shews us how very little change the Hindoos have undergone in about 21 centuries, allowances being made for the effect of foreign conquests; which, however, have produced fewer changes here, than they could have done any where else: for customs, which in every country acquire a degree of veneration, are here rendered sacred, by their connexion with religion; the rites of which are interwoven with the ordinary occurrences of life. To this, and to the seclusion from the

rest of mankind, inculcated by the Braminical religion, we are to ascribe the long duration of the Hindoo religion and customs; which are only to be extirpated, together with the very people among whom they prevail; and which have been proof against the enthusiasm and cruelty of the Mahomedan conquerors; nay more, have taught a lesson of moderation to those conquerors; who at last saw no danger arising to the state, from a religion that admitted no proselytes.

We are at the first view surprised to find that Arrian, who professes to treat of India, should confine himself to the description of a particular part only, while he had authors before him who had treated the subject at large. It may, however, be accounted for in this manner; that he chose to follow those only, who had been eye-witnesses to what they wrote; not compilers; and it is pretty clear that his account of India, is meant chiefly to illustrate the history of his hero. The following particulars, selected from among others, will shew to those who are conversant with India, how nearly the ancient inhabitants resembled the present. 1. The slender make of their bodies. 2. Their living on vegetable food. 3. Distribution into sects and classes: and the perpetuation of trades in families. 4. Marriages at seven years of age; and prohibition of marriages between different classes. 5. The men wearing ear-rings; parti-coloured shoes; and veils, covering the head, and great part of the shoulders. 6. Daubing their faces with colours. 7. Only the principal people having umbrellas carried over them. 8. Two-handed swords: and bows, drawn by the feet. 9. Manner of taking elephants; the same as in the present age. 10. Manufactures of cotton, of extraordinary whiteness. 11. Monstrous ants: by which the *Termites*, or white ants are meant; though exaggerated. [Herodotus, Book III, also mentions the ants: and his account is more extravagant than Arrian's.] 12. Wooden houses, on the banks of large rivers; to be occasionally removed, as the river changed its course. 13. The *Tala* tree, or

Tal; a kind of palm. 14. The Banian (or Burr trees) and the Indian devotees sitting under them.

We may perceive, however, on a reference to Arrian, that in many of the above particulars, he had either been indistinctly informed, or else mis-informed; as in the case of the Tal tree; the account of the white ants (which he discredits, at the time he relates it); and the manner in which the people daub their faces. The wooden houses, are, as far as I know, peculiar to the side of the Indus; and are remarked to be so, in the Ayin Acbaree. Arrian informs us, that he took his account of India from Nearchus and Megasthenes. In the account of the wooden houses, it may be perceived that he followed Nearchus; who seeing them on the side of the Indus, concluded they were in use every where else. As to Megasthenes, Arrian thought he had not travelled far over India; although farther than Alexander's followers. This opinion may serve partly to explain, why Arrian did not preserve the Journal of Megasthenes, by inserting it in his history of Alexander; or in his account of India.

His geography of India relates chiefly to the northern parts, or those seen by Alexander and Megasthenes. And his catalogue of rivers, most of which are also to be found in Pliny, and among which we can trace many of the modern names, contain only those that discharge themselves into the Ganges or Indus; such as *Cainas*, the Cane; *Cofsoamis* Cosa, or Cofs; *Sonus*, Soane; *Condobates*, Gunduck; *Sambus*, Sumbul, or Chumbul; *Agoramis*, Gogra; *Commenases*, Caramnafsa, &c. &c.

Of the different histories of Alexander that have travelled down to us, that by Arrian appears to be the most consistent; and especially in the geography of Alexander's marches, and voyage in the Panjab; which country, by the nature of its rivers, and by their mode of confluence, is particularly favourable to the task of tracing his progress. Diodorus and Curtius, had, or ought to have had the same materials before them, as Arrian: that is, the journals or

relations of Ptolemy and Aristobulus; who as friends and companions of Alexander, had opportunities of being well informed. We may conclude also, that there were among the followers of Alexander, journalists of a very different stamp; and indeed, the experience of our own days furnishes us with examples enough of that kind, to make it probable: and there are also to be found, compilers, who according to their tastes and dispositions, prefer the relation of the marvellous, to those of the sober and rational kind. Such as these, we may conceive Diodorus and Quintius Curtius to be; the latter particularly, under whose hand, every incident grows into a miracle or wonder. Arrian too, relates his wonders; but in such a manner as not to commit himself: or, as if he meant rather not to withhold what he thought himself bound to communicate, than as if he believed them himself, or wished to inculcate a belief of them in others.

It is to be regretted that Arrian did not preserve the journal of Megasthenes, as well as that of Nearchus. The loss of Bæton's, or Biton's book, which contained the geography of Alexander's marches, is also to be regretted. It existed in the time of Pliny, who quotes him: but I think, if Arrian had seen it, he would have been more particular in his geography, in certain places; as he ordinarily studies to be. Certainly, Arrian had not read Herodotus attentively: otherwise he would not have passed over in silence, the voyage of Scylax down the Indus; nor represented his hero as being ignorant of so curious a fact as the tides must have appeared, to those who read the same book. But that he had read part of Herodotus, is evident by his quoting his opinion respecting the delta of the Nile; and by an allusion to his account of the ants that dug up gold, in India, &c.

There is no reason to doubt that the Hindoo or Braminical religion was universal over Hindoostan and the Deccan, before the time of Alexander's conquest, if we regard the notices afforded by Herodotus and Arrian. Nor is it more extraordinary that one religion

should prevail over India, although composed of distinct governments, than that the Christian religion should prevail over a larger tract in Europe; or the Mohamedan over a still larger tract in Europe, Asia, and Africa. But although there might be an universality of religion, there were, as the learned well know, many distinct languages; and history, both ancient and modern, gives us the most positive assurances, that India was divided into a number of kingdoms or states, from the time of Herodotus, down to that of Acbar. Not only Herodotus, Diodorus, Pliny, and Arrian, are positive as to this point, but even Abul Fazil, who composed a history of the Indian provinces, in the reign of Acbar, in the 16th century. It is probable, that the almost universality of religion, and the union of so large a portion of this vast region, under the family of Tamerlane (particularly under Aurungzebe) has occasioned an idea, though a very erroneous one, that the Mogul empire, so called from the Mogul (or Mongul) dynasty, or that of Tamerlane, was always under one head.

But whatever kind of division may have taken place in the rest of Hindoostan, there appears to have been, generally, a large emperor kingdom, which occupied the principal part of that immense valley or plain, through which the Ganges takes its course: the capital of which has fluctuated between Delhi and Patna, as the limits of the empire have varied. That such a one does not exist at present, is probably owing to the Bengal provinces being in the hands of foreigners: but if we consider the union of interests between Bengal and Oude, the case is not essentially altered. Leave matters to their natural course, the whole valley will form one state again. The kingdom I speak of, was that of the PRASII and GANGARIDÆ, in the times of Alexander and Megasthenes: and which was very powerful, as appears by the strength of its armies, and the number of elephants trained to war. It seems to have extended westward to the Panjab country: and if *Palibothra* stood on the site of Patna, as late accounts seem to render probable (see

page 50 of the Memoir), we may suppose that it included at least part of Bengal. In effect, the kingdom of the Prasii could not well be of less dimensions than France: and the state of it (according to Arrian) was rich, the inhabitants good husbandmen, and excellent soldiers: governed by nobility, and living peaceably; their rulers imposing nothing harsh, or unjust, upon them. Those who are fonder of contemplating the silent happiness of a whole people, than of tracing the steps of a conqueror, will be gratified on reflecting that Alexander stopt short, on the borders of the country above described.

The trade from the western world to India, which has ever enriched those who have carried it on, has often changed hands, and been turned into different channels. A passion for Indian manufactures and products, has actuated the people of every age, in lower Asia, as well as in the civilized parts of Europe: the delicate and unrivalled, as well as the coarser and more useful, fabrics of cotton, of that country, particularly suiting the inhabitants of the temperate regions along the Mediterranean and Euxine seas. To this trade, the Persian and Arabian gulfs opened an easy passage; the latter particularly, as the land carriage between the Red Sea and the Nile, and between the Red Sea and the Mediterranean, took up only a few days. It is highly probable, and tradition in India warrants the belief of it, that there was, from time immemorial, an intercourse between Egypt and Hindoostan: similarity of customs in many instances (as related of the ancient Egyptians, by Herodotus, and which can hardly be referred to physical causes) existing in the two countries. The intercourse, we may conclude, was carried on by sea; if we consider the nature of the intervening countries, and the seat of the manufactures: and it might, moreover, be expected, that a nation so enterprizing as to undertake the circumnavigation of Africa (as, there can be no doubt, the Egyptians did, under the Pharaohs), would scarcely leave unexplored the coasts of a sea so much

nearer; and which, from the regularity of the periodical winds, was so easy of access. Whether Solomon's profitable traffic included that of India, there are, I believe, no means of determining; but it appears highly probable that it did: as also that the *voyages of three years*, made by the ships that arrived at *Tarshish*, were to the remote parts of Africa. Solomon's fleets were dispatched from the ports of the Red Sea; David's conquest of Idumea (Edom) giving him possession of the ports in the north-eastern branch of that sea. Tyre was founded about two centuries and a half before this period: and from the very flourishing state she was in, under Hiram, the cotemporary of Solomon, it may be concluded that her merchants possessed the greatest part of the trade of the known world, at that time; and the trade of the east among the rest, in all probability. Commerce being so ready a way to riches, it is no wonder that so enlightened a prince as Solomon, should profit by the example of his neighbours, and avail himself of his situation, from the enlarged state of his kingdom, which extended from the Euphrates to the Red Sea, and to the borders of Egypt (1 Kings, chap. iv. ver. 24): and which opened to him two of the great avenues to the east, by way of the Red Sea, and the Persian Gulf. M. Volney's idea, respecting the object that Solomon had in view, when he took possession of Palmyra, is, in my opinion, no less probable than ingenious; namely, to use it as an emporium of the East-India trade, by way of the Persian Gulf, and the course of the Euphrates. This was about 1000 years before our æra. But Solomon's trade, notwithstanding, was merely temporary; and reminds us of some feeble efforts, made in our own days, by an inland prince, who was constrained to borrow the mariners of the modern Tyre, as Solomon did those of the ancient. It was, no doubt, unsuitable to the genius of a commercial state, to aid a rival power: but either the same genius in individuals might lead them to embark in lucrative schemes, that were detrimental to their country; or it might be a temporizing policy on the part of

the state. Whether the Indian trade was carried on at the same time, by the Tyrians and Egyptians, as well as by the Judeans, cannot now be ascertained; but I think it probable that it might; and that, both by the route of the Persian Gulf, and the Red Sea; as we have seen it in our days. But whatever might be the mercantile state of Tyre in the days of Solomon, we find it about a century after, establishing a colony at Carthage; and about three centuries after that, its greatness was proverbial: I mean, about the date of Ezekiel's prophecy concerning it.

When Tyre fell into the hands of Alexander (before Christ 332, and about 260 after the time of Ezekiel), that city was in full possession of the Indian commerce. The route of their trade from India, was up the Red Sea to *Eziongaber*; and thence across the deserts of *Rhinocorura*, a town on the Mediterranean, and on the common frontiers of Palestine and Egypt: both of which countries were then in the hands of the Persians. From Rhinocorura, the goods were carried by sea to Tyre, and circulated from thence. The destruction of Tyre by Alexander, and the consequent foundation of Alexandria, turned the trade into a new channel; or rather, perhaps, returned it into its ancient one, Egypt. The Ptolemies, into whose hands Egypt fell, on the division of Alexander's empire, bestowed a fostering care on the new emporium, which also became the capital of the kingdom. Ptolemy Philadelphus constructed a canal from *Arsinoe* (near the present Suez) to the Pelusiac branch of the Nile: and afterwards, possibly because of the tedious and dangerous navigation of the upper part of the Red Sea, founded the city of *Berenice* on the western side of that sea, and nearly under the tropic (that is, 450 miles below Suez), from whence the merchandise was transported across the desert of Thebais, to Coptus on the Nile; and thence, down the stream of that river, and its canals, to Alexandria; which thus became the centre of trade between the eastern and western world; and, of course, one of the most opulent cities in either. It would appear, that

under the Ptolemies, the Egyptians extended their navigation to the extreme point of the Indian continent, and even sailed up the Ganges to Palibothra.

Alexandria held its rank as an emporium, even after Egypt became a Roman province: and preserved it in a considerable degree, during the various revolutions that happened in the east;* until the *re-discovery* of the passage round the south point of Africa, about 300 years ago, turned the bulk of the Indian trade into an entire new channel; and from which it is not likely ever to be diverted.

Berenice continued to be the port of outfit for the Roman East-India trade in the time of Pliny (A. D. 79), who details, in his sixth book, the account of the navigation to India; with many curious particulars relating to it; and among other matters, we may gather, that it was a complaint even in his time, that the trade to India drained Europe of its riches. Pliny says, that it cost fifty millions of sesterces every year; and yet the trade is not described as being extended to every part of India. Arbuthnot reckons a *sestertius* one-fourth part of a *denarius* of $62\frac{1}{2}$ grains of silver: at this rate, the above number of sesterces will produce above 440,000l. according to the medium value of silver in the present age. The prime cost of the cargoes brought into England, from India and China, in one year, has been above three millions sterling, freight included.

From Berenice it was reckoned 30 days navigation, down the Red Sea, to *Ocelis* (Gella), just within the strait of Bab-el-mandel. Another port was *Muza* (Mocha), but Ocelis was reckoned the best, and most commodious for departure. From thence to *Muziris*, the first port of merchandise in India, was 40 days sail: so that, as they left Berenice about midsummer, they might arrive in India in the latter end of August, when the violence of the SW monsoon was abated, and the coasting navigation safe and easy.

* The Venetian trade to the east, was by the channel of the Red Sea, and Alexandria.

Pliny does not forget to mention that they departed with the *west* wind: and these 40 days sailing, would be about 15 days *run*, for an European ship, in the modern style of navigating: being about 1750 marine (the same as geographical) miles, on a straight course.

We are told that these voyages were first made by coasting the Arabian shore, to the promontory *Syagrus* (Cape Rasalgate), and thence along the coast of Persia to the mouth of the Indus, &c. In the next age, a shorter and safer course was discovered: for from Cape Rasalgate, the ships made a direct course to *Zizerus*, a port in India; situated, as would appear by circumstances, on the northern part of the Malabar coast. After this, a direct course was made from the outlet of the Red Sea to *Muziris*, as above related. It is probable, after all, that they coasted a great part of the Arabian coast, in order to reduce the length of that part of their course that lay out of the sight of land: unless the habit of depending on the compass, has, in my idea, increased the difficulty of shaping a course without one.

Muziris is said by Pliny to have been an incommodeous place of merchandise, because the shallowness of the port, or river's mouth, made it necessary to discharge or take in the cargo in small boats, at a distance from the emporium: and besides, there was danger from the pirates at *Nitria*. Another port, more commodious and better stored with merchandise, was named *Barace* (or *Becare*), in the country of the *Niconidians*; and as the pepper of *Cottonara* was brought to this place in small boats, it may be concluded that Barace was within, or near to, the country of CANARA; which produces the best pepper in those parts, at the present day. After much study and investigation, I cannot apply to any particular spot, these ports of *Muziris* and *Barace*: for the Malabar coast abounds with ports of the above description: and it must be considered, too, that a shallow port for one of the Roman traders, which in all probability were smaller than ours, would be reckoned, in the present times, no port at all. The circumstances of the

pirate coast, and pepper country, however, confine us within certain limits: for, in the course to Muziris, the traders passed near the pirates' stations; and as these, by the lights which I have received from Pliny and Ptolemy, were nearly the same as the present (that is, between Bombay and Goa), I conceive the trading ports meant by Pliny, were situated between Goa and Tellicherry. The Periplus of the India sea, and the geography of Ptolemy, throw some faint light on the subject.

Ptolemy's ideas are these: *Tyndis* (going southward) succeeds *Nitria*; then *Muziris*; *Becare* (which is one of the readings of *Barace*); *Melcynda*, or *Neleynda*; *Cottiara*; and then *Comaria*, or Cape Comorin; whose proper name is *Komrin*, or *Komry*. And the Periplus enumerates in the same order, *Tyndis*, *Muziris*, and *Barace*: allowing 500 stadia between each, respectively. No three places appear more convenient to this relative disposition, and to the circumstances of the pirate coast and pepper country, than Goa, Meerzaw (vulgarly, Merjee), and Barcelore, or Bassinore. The first, namely, Goa, is just clear of the pirate coast: having Newtya, possibly the *Nitrias* of Pliny and Ptolemy (near which the pirates cruised on the Roman vessels in their way to Muziris) on the north of it. The second place, Meerzaw, or Merjee, has even some affinity in sound with Muziris; and is situated on a river, and at some distance from the sea. And Barcelore, or Bassinore, which may possibly be Barace, is one of the principal pepper factories at present: and therefore answers so far to Barace. *Nelcynda*, I take to be *Nelisuram*: and do not, with M. D'Anville, suppose Barace to be the port of Nelcynda, but a distinct place. It is said by Pliny, to be situated within the kingdom of *Pandion*; which is pretty well understood to be Madura: or to be comprised, at least, within the southern part of the peninsula: and therefore, the farther south we go for Nelcynda, the less we are likely to err. But even all this is conjecture, as far as relates to particular positions: nor is it of much

consequence; for we are clear that the ports of merchandise must be situated in or near to the country of Canara, the *Cottonara*, or pepper country of Pliny: that is, between Goa and Tellicherry: as before observed.

The ships returned from the coast of India about the month of December, with the north-east monsoon: and when entered into the Red Sea, they had a south, or south-west wind: so says Pliny. The voyage was made much within the compass of a year: and the profits are stated to be immense: but the particulars of the cargoes are not recorded.

There are no notices in Pliny (as far as I know) concerning any voyages of the Romans to the gulf of Bengal, or to the peninsula of Malay (the golden Chersonese), although it is clear from Strabo, who wrote before Pliny, that the Ganges had then been sailed up, as high as Palibothra. Ptolemy's geography, said to be composed about 60 years after Pliny, contains evident proofs that both of the Indian peninsulas had been explored: such is the mention of the pearl fishery between Ceylon and the continent; the diamonds found on the banks of the Sumbulpour river; and the point from whence ships that traded to the Malay coast, took their departure (supposed to be Point Gordeware): besides many names that can hardly be misunderstood in the application of them; as *Arcati*, the capital of the *Soræ* (or *Sora-mandalum*, from whence corruptly *Choromandel*); *Mesolia*, the district which contains Masulipatam; the river Cauvery, under the name of *Chaboris*, &c. The peninsula beyond the Ganges is also described in Ptolemy, as far as Cochin China, or perhaps to the borders of China, or *Sinæ*. [See M. D'Auville's *Antiquité Geographique de l'Inde*.] We may here observe also, by the way, that the islands scattered over the gulf of Bengal, in Ptolemy, and probably meant for the Andaman and Nicobar Islands, are most of them said to be inhabited by *Antropophagi*: and this idea has also been adopted by the modern navigators. Other islands, which may be meant either

for certain parts of Sumatra, or for some of the islands that lie extended along the western side of it, are also branded with the same character: and we find by Mr. Marsden, that it is generally believed that man-eaters exist in Sumatra, even at this day. I refer the *Bonæ Fortunæ* island, to the Great Andaman; and the 10 *Maniolæ*, to the northern Nicobars; being just the number of them: the 5 *Barafsæ*, and 3 *Sindæ* islands, together with the 3 *Saba-dibæ*; are the islands I allude to, as being either parts of Sumatra, or islands near it.

*SKETCHES of the History of HINDOOSTAN, since the Commencement
of the MAHOMEDAN CONQUESTS.*

THERE is no known history of Hindoostan (that rests on the foundation of Hindoo materials or records) extant, before the period of the Mahomedan conquests: for either the Hindoos kept no regular histories; or they were all destroyed, or secluded from common eyes by the Pundits. We may judge of their traditions, by that existing concerning Alexander's expedition: which is, that he fought a great battle with the Emperor of Hindoostan, near Delhi: and though victorious, retired to Persia, across the northern mountains: so that the remarkable circumstance of his sailing down the Indus, in which he employed many months, is sunk altogether. And yet, perhaps, few events of ancient times, rest on better foundations than this part of the history of Alexander (see Section III. of the Memoir), as appears by its being so highly celebrated, not only by his contemporaries, but by several of the most celebrated authors for some centuries following. As for the notices above referred to, in Herodotus, Pliny, and Arrian, &c.

they are rather transient views of the then state of Hindoostan, with a general account of manners and customs, than a history. Not but that these accounts are infinitely more pleasing and satisfactory, than a history would have been, if it contained nothing more than that of the Mahomedan conquests; that is, an account of battles and massacres; an account of the subversion of (apparently) one of the mildest and most regular governments in the world, by the vilest and most unworthy of all conquerors: for such the Mahomedans undoubtedly were, considered either in respect to their intolerant principles; contempt of learning, and science; habitual sloth; or their imperious treatment of women: to whose lot, in civilized societies, it chiefly falls to form the minds of the rising generation of both sexes; as far as early lessons of virtue and morality may be supposed to influence them.

The travels of Cosmas in the 6th century, and of the two Mahomedan travellers in the 9th, afford few materials for history: and but little can be gleaned from Marco Paulo, who crossed the peninsula, and went up the western side of it, to Guzerat, in the 13th century. Indeed, it is exceeding difficult to refer any incident related in this last author, to any particular country; as the geography of his travels is an enigma, for the most part.

It is chiefly to Persian pens that we are indebted for that portion of Indian history, which we possess. The celebrated Mahomed Ferishta, early in the 17th century, compiled a history of Hindoo-stan, from various materials; most of which, in the idea of Col. Dow (who gave a translation of this history to the world, about 20 years ago) were collected from Persian authors. The Mahabarut, an historical poem of high antiquity, and which I understand, Mr. Wilkins is now translating from the original Sanscrit (as he has already done an episode of it, under the title of Bhagvat Geeta) is supposed to contain a large portion of interesting historical matter: but if the father of Grecian poetry made so total a change in the story of Helen, in order to give a full scope to his

imagination; what security have we that another poet may not mislead us in matters of fact; that is, in all that is valuable in history, considered as such? Mr. Dow was far from supposing that the Hindoos were destitute of genuine histories of their own country: he was not indeed acquainted with the Sanscrit language, in which they must be written, if at all; but founded his belief on the information of people on the spot. If the specimens of early Hindoo history given in the Ayin Acbaree, are akin to those which Mr. Dow had in contemplation, I confess I can place no dependance on them. The most valuable part of Ferishta's history, he allows to be that, posterior to the first Mahomedan conquests, about the year 1000: and the following abstract of it is offered to the reader's notice, in order to fix in his mind an idea of the successive changes in the state of the empire of Hindooostan; which from a pure Hindoo government, became a Mahomedan one; and continued to be so, under various dynasties of monarchs, from Persia, Afghanistan, and Tartary; until the beginning of the present century; these princes, moreover, adding to the original country of Hindooostan, all the other provinces situated within the Ganges. This unwieldy state then dropping to pieces, anarchy succeeded; which, in most parts of it, is scarcely composed at present: and which had nearly given rise to a new Hindoo empire, under the Mahrattas: but the intervention of foreign powers prevented it. Lastly, one of those foreign powers seizing on the fairest provinces, and taking the lead in the empire, although removed from it, the distance of an actual route of fifteen thousand miles!*

Even after the commencement of the Mahomedan conquests, we find little more in Ferishta, save the histories of the empire of Ghizni (or Gazna) and Delhi, until the subjection of all Hindooostan, by the Patan emperors in the beginning of the 13th century: for Hindooostan continued to be divided into a number of separate

* No part of the Roman empire was distant from its capital, by the most circuitous route, more than 2800 miles.

kingdoms, each of which required a particular history: and of which we know only such parts of it, as were interwoven with the history of the conquering country. Many of these old Hindoo kingdoms, bore the same names as the present soubahs (or vice-royalties) do; and had, probably, nearly the same limits. The history of the Deccan, is yet more obscure than that of Hindoo-stan; being brought into view later, as the Mahomedan conquests extended thither: and which began to encroach on it about the year 1900, although the entire conquest of it, was not made until late in the 17th century.

It may be observed, that the first Mahomedan conqueror who made any establishments in Hindoostan, that is, Mahimood, found little less difficulty in subduing the country, than the latter conquerors did, when so many kingdoms were united under the Patan emperors: for those kingdoms, now become provinces, were too extensive, and composed of materials too discordant to unite properly: not to mention, that they were never long enough united, to produce the happy effects resulting from a long period of intercourse under one common head; which assimilates the whole into one mass, like the French or British provinces. And this must ever be the case, in very extensive empires, where a delegation of great powers, and distant situation, prepare the provinces for independency, whenever the supreme government happens to be placed in weak hands. Hence, Hindoostan, even under the Moguls, may be considered only as a collection of tributary kingdoms; each accustomed to look no farther than to its own particular viceroy; and, of course, ever in a state to rebel, when the imbecility of the emperor, and the ambition of the viceroy, formed a favourable conjuncture. To this must be attributed the little resistance that was made to the arms of Tamerlane, Baber, Humaioon, and Nadir Shah; although so many provinces were at those times united under one prince.

"The first Mahomedan conquests that led to permanent establishments in Hindoostan, were those of the beforementioned Mahmood, Emperor of Ghizni: for I make a distinction between *these*, and the first *irruptions* of the Mahomedans; which left such slight traces behind them, as to be scarcely apparent. Among others, was that of the Caliph Valid in the first century of Mahomedanism. The empire of Ghizni was founded by Abistagi, governor of Korasan (A. D. 960), who revolted from the King of Bucharia: whose ancestor, in his turn, had arisen to power, on the ruins of the Caliphat empire, about 87 years before. Ghizni consisted chiefly of the tract which composed the kingdom of Bactria, after the division of Alexander's empire: that is, the countries lying between Parthia and the Indus; and south of the Oxus.* Ghizni (or Gazna) a city placed among the western sources of the Indus, and not far from the Indian Caucasus, was the reputed capital; though Balk or Balich claimed this honour, likewise.

Mahmood (commonly styled Sultan) was the third in succession, from Abistagi: and was himself the son of Subuctagi, who appears to have meditated the conquest of the western part of India; and, like Philip, left his projects, as well as his kingdom, to his son. Subuctagi had carried his arms across the Indus, and ravaged the Panjab; but made no establishments: for we find, that at the time of his son Mahmood's invasion, a prince of the Bramin race, or religion, named Jeipal, possessed the whole country, along the east side of the Indus, to Cashmere; and that he had the kings of Delhi, Agimere, Canoge, and Callinger, for allies: so that it may be concluded, from the circumstance of the frontier provinces being under a Hindoo government; and from the state of the Hindoo religion, throughout the scene of Mahmood's conquests; that the Mahomedans, whatever ravages they might have committed, previous to this time, had not, as we have before observed,

* The reader is requested to consult the map at page 200, for the countries lying between the Indus and the Caspian Sea.

formed any establishment in Hindoostan: but that the whole country was perfectly Hindoo, at the time of Mahmood's conquest. It must be observed, that I do not class the country of Cabul, or any of the provinces on the west of the Indus, as belonging to Hindoostan proper.

Before Mahmood began his first expedition into India, which was only three years after his accession, he extended his empire northward, by reducing Bucharia; from whose king, his ancestor had revolted, as has been observed above.

In A. D. 1000, he entered Hindoostan: but in the course of eight years, he made no further progress than Moultaan. The people of Moultaan, who were the *Malli*, and *Catheri* (that is, the Kuttry or Rajpoot tribe) of Alexander, must have preserved their ancient spirit, to be able to oppose, for so long a time, such formidable armies, headed by so furious an enthusiast. In 1008, we find all the Hindoo princes, from the west of the Ganges to the river Nerbuddah, united against him, for the common defence of their religion; the extirpation of which, was to Mahmood, an object equal to that of the acquisition of territory, or subjects. It may be doubted whether the acquisition of subjects, the rational end of conquest, ever enters into the minds of barbarous conquerors; such as this Mahmood, Tamerlane, or Nadir Shah. One would rather suppose the contrary; or, at least, that they were totally indifferent about it, by their massacres and exterminations. The confederate Hindoos were defeated: and Mahmood's first essay towards effecting the downfall of their religion, was the destruction of the famous temple of Nagorkote, in the mountains bordering on the Panjab country. His next expedition, being the sixth, was in 1011; when Tannasar, a more celebrated place of Hindoo worship, on the west of Delhi, experienced a like fate with Nagorkote; and the city of Delhi itself, was taken at the same time. In 1018, he took Canoge, and also destroyed the temples of Matra, or Matura (the *Metibora* of Pliny), a city of high anti-

quity, and no less an object of religious veneration, near Agra. After this, turning his arms against the Rajpoots of Agimero, he found either them, or their country, which is full of mountains and fastnesses, too strong for him.

His twelfth expedition, in 1024, was fatal to the celebrated temple of Sumnaut, in the peninsula of Guzerat, adjoining to the town of Puttan, on the sea coast; and not far from the island of Diu, now in the hands of the Portuguese. His route was by Moultan and Agimere, the citadel of which last, he was compelled to leave in the hands of the enemy: and in crossing the desert, between it and Moultan, he hazarded the loss of his army, for want of water. The destruction of Hindoo temples, with their priests and votaries, appears to have afforded this monster the highest delight. Nothing offends our feelings more, than the progress of destruction urged by *religious zeal*: as it allows men to suppose themselves agents of the Divinity; thereby removing those checks which interfere with the perpetration of ordinary villainy; and thus makes conscience a party, where she was meant to be a judge. Such also was Tamerlane: but to the alleviation of the misfortunes of the Hindoos, the enthusiasm of Mahomedanism had lost its edge, before the invasion of Nadir Shah. Had this predominated in his savage nature, the whole scene of his conquests must have remained a solitary desert.

The city of Nehrwalla, the ancient capital of Guzerat, together with that whole peninsula, fell into the hands of Mahmood; who died four years afterwards (1028) possessed of the eastern, and by much the largest part of Persia; as well as, nominally, of all the Indian provinces from the western part of the Ganges, to the peninsula of Guzerat; and from the Indus, to the mountains of Agimere: but the Panjab was the only part of it, that was subjected to regular government, under the Mahomedans; as being in the vicinity of the Ghiznian empire. As for the Rajpoots of Agimere, they still preserved their independence, among their rugged moun-

tains, and close vallies; and not only then, but in a great measure, down to the present time: being in respect of Hindoostan, what the country of Switzerland, is to Europe; but much more extensive, and populous. From Mahmood to Aurungzebe, the Indian conquerors were contented with the nominal subjection of those hardy tribes: among whom, military enthusiasm, grafted on religious principles, is added to strength and agility of body; and this race is disseminated over a tract equal to half the extent of France. It goes under the general name of Rajpootana: and is the original country of the founder of the Mahratta state; whose rulers, about 30 years ago, aspired at universal empire in Hindoostan.

The Ghiznian empire, subject to the same causes of decay, with other unwieldy states of rapid growth, was in 1158, forcibly divided: the western and largest part, and which still retained the ancient name of the empire, being seized on by the family of the Gaurides (so denominated from Gaur, or Ghor, a province and city, lying beyond the Indian Caucasus) while the provinces contiguous to both shores of the Indus, remained to Chusero, or Cusroe, who fixed his residence at Lahore.* And even his posterity were, in 1184, driven out of their kingdom, by the Gaurides. The Mahomedans, thus become nearer neighbours to the Hindoos, by fixing their residence at Lahore, extended, as might be expected, their empire eastward; Mahomed Gori, in 1194, perpetrating, in the city of Benares, the same scenes as Mahmood had before done at Nagorkote and Sumnaut. Benares was regarded as the principal university of Braminical learning; and we may conclude that about this period, the Sanscrit language, which was before the current language of Hindoostan, began to decline in its purity, by the admixture of words from that of the conquerors; until the language of Hindoostan became what it now is: the original Sanscrit, preserved in their ancient writings, becoming a dead language. Such

* For the dates of the reigns of the emperors of Hindoostan, the reader is referred to a Chronological Table, at the end of the Introduction.

mutations have taken place in every country, where the conquerors have been numerous enough to effect it: the Saxon language was at the same period suffering from the Norman conquest, what the Sanscrit did from the Ghiznian. Mahomed Gori also carried his arms to the south of the river Jummah, and took the fortrefs of Gwalior; which then gave name to a kingdom, that has since composed nearly the soubah of Agra: he also reduced the eastern part of Agimere.

The death of this emperor, in 1205, occasioned a new division of the Ghiznian empire, the Persian part remaining to Eldoze, and the Indian part to Cuttub, who founded the Patan or Afghan dynasty in Hindoostan. The Afghans originally inhabited the mountainous tract lying between India and Persia, or the ancient Paropamisus. Before the elevation of Cuttub to the throne, he had carried his arms, under Mahomed Gori, into Agimere and Guzerat. Lahore was his capital, originally; but the necessity of fixing the imperial residence, nearer to the centre of the new conquests, occasioned him to remove to Delhi. It may be observed of the capitals of states, in general, that such as are neither emporiums of trade, nor meant as citadels in the last resort, are (as it were) attracted towards the quarter, from whence hostility is either intended, or expected.

The Emperor Altumsh, who succeeded to the Patan throne, in 1210, completed the conquest of the greatest part of Hindoostan proper. He appears to have been the first Mahomedan that made a conquest of Bengal; the government of which was from this time bestowed on one of the reigning emperor's sons. It was during this reign (1221) that Gengiz Cawn, among his extensive conquests (perhaps the most so, of any conqueror in history) accomplished that of the empire of Ghizni; putting an end to the dynasty of Charasm, which then occupied that throne: and driving before him, the unfortunate Gelali, son of the reigning emperor; who swam the Indus to avoid his fury. Gengiz, however, left Hindoostan undisturbed.

About A. D. 1243, the Moguls, or Munguls, successors of Gengiz, who possessed, or rather over-run the countries on the north-west of Hindoostan, made several irruptions into it: and Turmeshirin Khan is reported, by Sherefeddin (the historian of Timur), to have carried his arms into the Dooab; but without making any establishment. Ferishta takes no notice of the progress of this desultory conqueror, but only describes the inroads of the Moguls into the Panjab, which now frequently happened: although it was not till more than 150 years afterwards, that, under Timur, or Tamerlane, they penetrated to the centre of India. Ferishta describes also an irruption of Moguls into Bengal, by way of *Chitta* and *Thibet*, in 1244.

I have before observed, that the provinces of Hindoostan were held rather as tributary kingdoms, than as provinces of the same empire: and that they seldom failed to revolt when a favourable opportunity offered. In 1265, Maiwa regained its entire independence of the crown of Delhi; having gradually shaken off the yoke, laid on it by Cuttub in 1205: and the Rajpoots were on every occasion, notwithstanding their comparative vicinity to the capital, asserting their independency, likewise. Of the state of the internal government of Hindoostan, a judgment may be formed, by the punishment inflicted on the Mewatti, or the Banditti tribe, which inhabit the hilly tract, within 25 miles of Delhi. In 1265, 100,000 of these wretches were put to the sword: and a line of forts was constructed along the foot of their hills. Rebellions, massacres, and barbarous conquests, make up the history of this fair country (which, to an ordinary observer, seems destined to be the paradise of the world) the immediate effect of the mad ambition of conquering more than can be governed by one man: for the whole empire being portioned out to rapacious governors, who domineering over the governed, until their spirits were sufficiently debased, were at last able to persuade them, that their common interest lay in taking up arms, to render these governors inde-

pendent: and indeed, had it brought them nearer to the point of having a regular, permanent government, this might be true; but, in fact, it only subjected them to a new conqueror; or to the punishment of rebellion from the former one. It would appear as if the warm climates, and more especially the open countries, situated within them, were destined to be the seats of despotism: for that the climate creating few wants, and the soil being productive without any great exertion; the inhabitants of it do not possefs those energies that, in a cooler climate, prompt mankind to investigate their natural rights, and to assert them. This, however, is a point that I shall not venture to decide on; although I believe it is a fact not to be disputed, that throughout the known parts of the world, despotism prevails most in the warm climates. The Patan, Mogul, and Tartarian conquerors in Hindoostan and China, however hardy at first, have, in a course of ages, sunk into the same state of effeminacy with their subjects: and, in their turn, have, with them, received a new master. Let those who are in the habit of complaining of the severity of a northern climate, reflect, that whatever physical evils it may produce, it matures the great qualities of the mind; and renders its inhabitants pre-eminent among their species: while a flowery poet, or a more flowery historian, is the most eminent production of the tropical regions.

While the kings of Delhi were prosecuting their conquests in the east and south of Hindoostan, the provinces on the west of the Indus, were, of course, neglected; although not avowedly relinquished. It might have been expected, that so excellent a barrier as the upper part of the Indus, and the deserts beyond Agimere, would have induced an emperor of Hindoostan to give up, of choice, all the provinces that lay on the west of this line: and the neglect of so prudent a conduct, occasioned the peace of the empire to be often disturbed; and ended in their being forcibly taken away at last by the Moguls: who, not contented with their new acquisitions on the west of the Indus, crossed that river, and

invaded the Panjab: and so formidable did they appear to Feroze II., that some tribes of them were permitted to settle in that country (A. D. 1292). The reader will not forget the similar conduct of the Roman emperor Valens, with respect to the Goths, who were permitted to cross the Danube, and settle in Thrace: and the similitude is the more striking, in that the Hindooostan empire was afterwards conquered by the descendants of those Moguls. This Feroze II., although of the tribe of Chilligi or Killigi (from Killige, near the mountains of Gaur), is, nevertheless, included in the Patan dynasty: the name Patan, or Pitan, being applied rather in a loose manner, to all the tribes bordering on the common frontiers of India, Persia, and the province of Balk; that is to say, the ancient province of *Paropamisus*.

In 1293 this emperor gave into the scheme of attacking the Deccan; which, at this period, must be understood to mean the country lying generally to the south of the Nerbuddah and Mahanada (or Cattack) rivers: a tract nearly equal in extent to what he already possessed in Hindooostan; and which extended from the shores of the Indus, to the mouth of the Ganges; and from the northern mountains, to Cattack, Siron, and Agimere: the greatest part of Malwa, with Guzerat, and Sindi, being then independent. The riches of the King of Deogire (now Dowlatabad), one of the principalities or states of the Deccan, gave birth to this project; and the projector was Alla, governor of Gurrah, which nearly bordered on the devoted country. The covetousness of the emperor made him embrace a proposal, which eventually involved in it his own ruin, for Alla afterwards deposed him by means of that very plunder.

Alla's first expedition was attended with the capture of Deogire (or Deogur), and with it an incredible quantity of treasure and jewels; with which, having increased his army, he deposed and murdered the emperor. We cannot help acknowledging the justice of this punishment, when we recollect the unworthy motives

on which the expedition to the Deccan was undertaken; and that, moreover, the emperor had been bribed by Alla, with part of the plunder taken in a former predatory expedition to Bilsah.

When Alla (who was the first of the name) had possession of the throne, in 1295, he began his plan of conquest, by the reduction of Guzerat; which, while it continued independent, was, by its local situation, a strong obstacle to his designs on the Deccan. Next, he reduced Rantampour, and Cheitore, two of the strongest holds of the Rajpoots, in Agimere. This was the first time that Cheitore had fallen to the Mahomedans. In 1303, he also reduced Warangole, the capital of Tellingana, another principality of the Deccan, comprehending nearly the present country of Golconda. This, as well as Cheitore, was a city and fortress of vast extent and population. But in the midst of these conquests, and probably the effect of them, the watchful and restless Moguls, from the opposite quarter, penetrated even to Delhi; and plundered the suburbs of it.

In the following year, the remainder of Malwa was conquered; and in 1306, the conquest of the Deccan was resumed, under Cafoor, the general of Alla; who proceeded to the Deogur country, by the route of Baglana, which he reduced in his way; and which Ferishta* calls the country of MARHAT. Cafoor not only carried his arms into Deogur (Dowlatabad), and from thence into Tellingana, but into the Carnatic likewise, in 1310. By the Carnatic, is here meant the peninsula in general, lying on the south of the Kistnah river. It is not known how far he penetrated southward, but he was directed by Alla to reduce MABER, which we understand to comprehend the southern part of the peninsula. His expedition appears to be rather predatory, than otherwise; *agreeable to the genius of his master, Alla.* The quantity of treasure

* It is to be regretted that Col. Dow did not give a literal translation of Ferishta, as a text, and add his own matter, or explanations, in the form of notes. We should then have been able to distinguish the one from the other.

amassed, exceeds all belief. It was said that silver was found too cumbersome for the soldiery; gold being in such plenty. The historian observes on this occasion, as well as on the taking of Deogur, that the princes of the Deccan had been for a great number of ages, amassing this treasure: so that their country had probably continued undisturbed all that time.

In 1312 Casoor ravaged the northern part of the Deccan again, and laid Tellingana and the Carnatic under a tribute: but the entire conquest of those countries was not effected until about three centuries afterwards, under the latter princes of the house of Timur. Alla died in 1316. At this period all Hindooostan proper was comprehended in the Patan empire (so called from the dynasty in possession of the throne); and the interior policy is said to be so well regulated, that strangers might travel throughout the empire, in perfect security.

Rebellions breaking out in Tellingana in 1322, and 1326, it was again subjected: and the whole Carnatic ravaged from sea to sea. But under a succeeding emperor, Mahomed III. the princes of the Deccan assumed courage, and headed by Belaldeo, King of the Carnatic, they drove the Mahomedans entirely out of those countries; nothing remaining to them, save the fortress of Dowlatabad (or Deogur). About the same time (1344) the city of Bijinagur, corruptly called Bisnagar, was founded by the same Belaldeo. Mahomed, who appears to have been a weak prince, lost much territory also, by rebellions in Bengal, Guzerat, and the Panjab: mean while, he was occupied in attempting the conquest of China, but was repulsed on the frontier. It is probable, from circumstances, that he went by way of Assam. This emperor also planned the absurd scheme of transferring the seat of government from Delhi to Dowlatabad: and attempted it twice, but without success.

Feroze III. who succeeded in 1351, appeared more desirous of improving the remains of the empire, after the defection of Bengal

and the Deccan, &c. than of extending it, by arms. Canals, and public works, for the improvement of agriculture, and of the inland navigation, were his favourite objects, during a reign of 37 years. (See the Memoir, Section III.) The Moguls made another irruption in 1357, and the time now approached, when a more serious one was to take place under Timur, or Tamerlane. After the death of Feroze, in 1388, rebellion and civil war, during a course of several years, prepared the empire for foreign subjection: and a minority, in the person of Mahmood III. who succeeded in 1393, brought matters to a crisis. During the confusions attendant on the state of a minority, in an empire which could with difficulty be held together by a veteran despot, the historian remarks an unusual circumstance: two emperors in arms against each other, residing within the same capital. In this state of things, Timur, who had already extended his empire over all the western Asia and Tartary, turned his arms towards Hindoostan in 1398. In the preceding year, he had sent his grandson Peer Mahomed, to reduce the Panjab, and Moultan; and in October, crossed the Indus himself; and joining his grandson near Moultan, his army proceeded in different divisions to Delhi, which submitted, without what may be properly termed, a battle. This inhuman monster, who had credit enough with a poet of the present century, to be introduced on the stage, as a hero, possessing great and amiable qualities, obtained in Hindoostan the title of "the destroying Prince:" and was truly worthy of it, from the numerous massacres and exterminations, executed under his immediate direction. Timur staid in Delhi only 15 days: and then appears to have been on his return to the seat of his empire, when, hearing of a fortrefs in the Dooab, that had resisted the arms of a former Mogul invader (Turmesherin Khan), he marched towards it and took it. From thence he proceeded to the place where the Ganges issues out of the mountains, and where the Hindoos resort at certain seasons, in vast numbers, to pay their adorations to, and to purify themselves in that

sacred stream. His object was the extermination of these inoffensive people; and he partly succeeded. From this place, turning to the north-west, along the foot of Mount Sewalick, he continued his massacres, though not without opposition, until he arrived on the frontiers of Cashmere. He spent little more than five months between the time of his crossing and recrossing the Indus; and appears to have paid more attention to seasons than Alexander did: as Timur chose the fair season for his expedition, whereas Alexander was in the field, in the Panjab, during a whole rainy season. (See Memoir, Sect. III.) Timur, however, may be said rather to over-run, than to subject, or conquer; for he did not disturb the order of succession in Hindoostan, but left Mahmood on the throne: reserving to himself the possession of the Panjab country only; and this his successors did not retain long. His views were at this time directed towards the Turkish empire; and this made him neglect India, which did not promise so plentiful an harvest of glory as the other. During his life, which ended in 1405, he was prayed for in the mosques of Hindoostan, and the coin was struck in his name: but this might be more the effect of policy in the usurpers of Mahmood's throne, than the act of Timur. It does not appear from Ferishta, any more than from Sherefeddin, that this prince carried much treasure out of Hindoostan with him. But Nadir Shah's acquisition of the precious metals, at a later period, was great, beyond all ideas of accumulation in Europe: and is only to be accounted for, by the influx of those metals from America, during that interval.

For the geography of Timur's marches, the reader is referred to the third section of the Memoir; and to the map.

If Hindoostan was in confusion before this invasion, it may be expected that on Timur's departure, matters became much worse. The death of Mahmood happened in 1413; and with him ended the Patan dynasty, founded by Cutub in 1205. The throne was then filled by Chizer, a Seid (that is, one of the race of the pro-

phet Mahomed), whose posterity continued in it until 1457: when Belloli, an Afghan of the tribe of Lodi, took possession of it, on the abdication of Alla II. under whom all Hindoostan fell into separate governments; and a potentate, styled King of the EAST, whose residence was at Sionpour, in the province of Allahabad, became the most formidable among them; while the King of Delhi had but the shadow of authority remaining to him. The son of Belloli recovered a considerable part of the empire; and in 1501, made Agra the royal residence. It was during this reign, that the Portuguese first accomplished the passage to India, by the Cape of Good Hope: but as their connexions were entirely with the maritime parts of the Deccan, which were independent of Delhi, no notice of this event is taken by Ferishta, in his history of Hindoo-stan. The empire fell again into utter confusion, under Ibrahim II. in 1516: and this paved the way for the conquest of Hindoo-stan by Sultan Baber, a descendant of Tamerlane and of Gengiz Kan; who reigned over a kingdom composed generally of the provinces situated between the Indus and Samarcand. Being dispossessed of the northern parts of his dominions by the Usbecs, he determined to try his fortune in Hindoo-stan, whose distracted situation flattered his hopes of conquest. His residence at this time was at Cabul, from whence he undertook his first expedition across the Indus, in 1518. After this, he made four others: and in the fifth (A. D. 1525), he defeated the Emperor of Delhi, and put an end to the dynasty of Lodi. It is said that Baber crossed the Indus, this last time, with only 10,000 chosen horse; the enemy's generals, by their revolts, furnishing him with the rest of his army. In this, we have a fresh instance of the small dependance that the Hindoo-stan emperors could have on their viceroys and generals. Baber reigned only five years in Hindoo-stan; during which, his chief employment was the reduction of the eastern provinces. Nor did he relinquish his Persian provinces, by crossing the Indus. His son, Humaioon, succeeded him in 1530; but

the short reign of Baber, did not allow time enough to compose the distractions that had so long prevailed; or to exterminate the seeds of rebellion: for the intrigues of his brothers, and the open rebellion of Sheer Kan, drove Humaioon, although a prince of considerable abilities, and great virtues, from his empire, in 1541. His flight towards the Indus, and his sojourn among the Rajpoot princes of Agimere, furnish a striking picture of royal distress. During his stay there, his son Acbar was born, whom we may reckon among the greatest of the sovereigns of Hindoostan. The provinces on the west of the Indus were held by a brother of Humaioon. The usurper Sheer did not long survive his new dignity; being killed at the siege of Cheitore in 1545: and was buried at Saseram in Bahar, his original estate, in a magnificent mausoleum, which he had ordered to be constructed during his lifetime; and of which a drawing has lately been exhibited in this country, by Mr. Hodges. Sheer Kan was of Afghan origin; and held the soubahship of Bahar, when he rebelled: and at his death, his empire extended from the Indus to Bengal. He left his throne to his son Selim: but so very unsettled was the state of Hindoostan, that no less than five sovereigns appeared on its throne, in the course of 9 years. In effect, there could not exist in the minds of the people, any idea of regular government, or regular succession: for there had scarcely ever been 12 years together, during the last, or the present century, without furnishing some example of successful rebellion. This induced a strong party in Hindoostan, to invite Humaioon back; and accordingly, in 1554, he returned, and met with but little resistance: but died in consequence of an accident, the following year. He was celebrated for the mildness and benevolence of his nature: and his return, notwithstanding the shortness of his reign, was a public blessing; as it was the means of seating his son Acbar quietly on the throne. When he was driven from his empire by Sheer, he resided with Shah Tamasp, of Persia, who aided him in the recovery of it: and in the early

part of his exile, he recovered possession of the provinces beyond the Indus.

Acbar was about 14 when his father died, in 1555. The reign of this prince has been celebrated by the pen of the famous Abul Fazil, in a book called the *Acbar-namma*, or history of Acbar. The business of this sketch, being rather to give a sort of chronological table of events, than to aim at a circumstantial history, I shall not attempt to particularize the great events of this long and busy reign of 51 years: but refer the reader to the history of Hindoostan, by Col. Dow: in which, not only a full account of Acbar, but also of his descendants, down to Aurungzebe, will be found. As in the person of Baber, the line of Tamerlane first mounted the throne of Hindoostan; so in that of Acbar, the grandson of Baber, it may be said to be established. The conquest of their ancestor, about a century and a half before, had no share in effecting the present settlement. Baber, was in reality the founder of the Mogul dynasty; and from this event, Hindoostan came to be called the **Mogul empire.***

The first years of Acbar's reign were employed in the reduction of the revolted provinces, from Agimere to Bengal; in which the great Byram, who had a share in recovering the empire for Humaicon, was a principal actor. These conquests were secured in a manner very different from those, achieved by former emperors; that is, by a proper choice of governors; by wise regulations; by an unlimited toleration in religious matters; and by a proper attention to the propensities of the people: to all which, a long and vigorous reign was peculiarly favourable. The Hindoos still formed the bulk of the people; even in those provinces, which, from their vicinity to the country of the conquerors, had been the most

* Properly speaking, the **Mogul Empire** was that, over which Tamerlane and his immediate successors reigned; and in which, India was not included. Custom, however, has transferred the name to the empire held by the descendants of Tamerlane, in Hindoostan and the Deccan.

frequently over-run: and experience had taught the Mahomedan conquerors, that the passive religion and temper of the Hindoos, would, if left to themselves, never disturb the established government. But the DECCAN was a stumbling block to the Mogul emperors. In 1585, Acbar resolved on the attack of it, and soon after carried the war into Berar, while another army was reducing Cashmere, in an opposite corner of the empire. The Deccan appears at this time, to have been divided into the kingdoms or states of Candeish, Amednagur (or Dowlatabad) Goleonda or (Bagnagur) and Visiapour. Berar and the Carnatic, each of which included several distinct governments, are not specified by the historian, as members of the Deccan: by which it would appear that they do not, in strictness, appertain to it. In the popular language of the times, there were reckoned to be four principalities in the Deccan: that is to say, the four first mentioned, above. Most, if not all of these, were at this time governed by Mahomedan princes; although we are not in posseſſion of any history of the conquests or revolutions, that transferred them from the Hindoos to the Mahomedans. At the time of Acbar's death, in 1605, no further progres was made in the reduction of the Deccan, and the adjoining countries, than the taking posſeſſion of the western part of Berar, Candeish, Tellingana (a division of Golconda) and the northern part of Amednagur; the capital of which, bearing the same name, was taken in 1601, after a long and bloody siege, and an unsuccessful attempt to relieve it, by the confederate princes of the Deccan.

Acbar was the glory of the house of Timur. Hindoostan proper, had never, at any period since the first Mahomedan conquest, experienced so much tranquillity, as during the latter part of his reign: but this tranquillity would hardly be deemed such, in any other quarter of the world; and must therefore be understood to mean a state, short of actual rebellion, or at least, commotion. Prince Daniāl, his eldest son, died just before him; and Selim,

the next, in right of primogeniture, succeeded under the title of Jehanguire.

Jehanguire reigned about 22 years. Under him, the conquest of the Deccan was not lost sight of, though but faintly pursued. War was made on the Rajpoots, and the Rana, or chief prince, brought to terms. The rebellions of the emperor's son, Shah Jehan, embittered the latter part of his reign; and the influence of his mistress, Noor Jean, rendered his councils weak, and constrained his government. However, the provinces having been held together for near 70 years, the empire had acquired a degree of consolidation; and was not so liable to be shaken, as it would have been at some former periods, under the operation of similar events. It was in this reign, and in the year 1615, that Sir Thomas Roe was sent as the first English ambassador to the Emperor of Hindoostan. The Portuguese had by this time acquired considerable settlements in Bengal and Guzerat; but only those in Guzerat, where they also possessed some extent of territory, attracted the notice of the court: and it is curious to observe what the author of the *Ayin Acbaree* says of them, about the year 1560. Speaking of the lands of Guzerat, he says, "By the neglect of the king's governors, several of these districts are in the hands of Europeans." Ferishta, also, speaking of the site of an ancient Hindoo temple, near Diu, says that it was situated in the districts that were subject to the "Idolaters of Europe."

Shah Jehan succeeded his father in 1628. The conquest of the Deccan was pursued with more vigour in this reign: and the plunders and devastations perpetrated there, occasioned most, or all of its princes to make submission, and acknowledge the emperor, lord paramount. Golconda was in part, actually taken possession of: but Visiapour and the Carnatic, together with the region of the Gauts, remained in the hands of their ancient possessors.

Candahar, a fortress situated on the common boundary of Persia, and of the Mogul provinces beyond the Indus, was, at this time,

a subject of contention between the two monarchs of Persia and Hindoostan. The first serious quarrel between the Europeans (Portuguese) and Moguls, happened during this reign, 1633: when the Portuguese were expelled from Hoogly, on the Ganges. In 1658, the civil wars commenced between the emperor and his sons; as well as between the sons themselves: which ended in the elevation of Aurungzebe (the third in descent), after he had deposed his father, and murdered or expelled his brethren. The account of these transactions may be seen at large in Bernier and Dow; and is a very curious piece of history. In 1660, Aurungzebe (who took the name or title of Allumgire, and was the first of that name) was in peaceable possession of the throne: and from that period, until the year 1678, there prevailed, throughout Hindoostan in general, the most profound peace that had ever, perhaps, been known: but the remainder of the Deccan was still a *desideratum*; and Aurungzebe disdained to have any other boundary on the south, than the ocean. Accordingly, the conquest of the remote part of the Deccan employed a very considerable part of his leisure during the latter part of his reign: when the whole of that region, together with the peninsula, a few mountainous and inaccessible tracts only excepted, were either entirely subjected, or rendered tributary to the throne of Delhi. What might appear to Aurungzebe to render this step of subduing the Deccan necessary, was the determined spirit and growing power of Sevajee, the founder of the Mahratta state; who, by his conquests in Visiapour, appeared almost in the character of a rival to Aurungzebe.

A rebellion of the Patans beyond the Indus, in 1678, called for the presence of Aurungzebe there; which was no sooner quelled, than his persecution of the Hindoos stirred up the Rajpoot tribes in Agimere. He undertook this war also in person: but was hemmed in, with his whole army, between the mountains, and the empress herself was taken prisoner: she was afterwards, however,

permitted to escape, as well as the emperor. This did not discourage him from carrying the war into the Rajpoot country again, in 1681: when he took and destroyed Cheitore, the famous capital of the Rana; as well as all the objects of Hindoo worship found there. The spirits of these gallant people were, however, still unsubdued; and Aurungzebe was necessitated to grant them a peace.*

Sevajee died in 1680, and left his rising state of Mahrattas to his son Sambajee; who was afterwards betrayed into the hands of Aurungzebe, and barbarously put to death. Still, however, the mountainous parts of Baglana were unsubdued; and although the kingdom of Visiapore was reduced in 1686, and Golconda in the following year, yet he found great difficulty in prosecuting his conquests on the west; as appears by his camp being fixed on the Kistnah river, about 200 miles to the north-eastward of Goa, in 1695: I say, appears; for we have at present no regular history of any later period than the 10th year of Aurungzebe; that is, to the year 1670, when Mr. Dow's history finishes: all the events that are subsequent to this date, are from other authorities.

It is said that Aurungzebe was employed in the Deccan from the year 1678, to the time of his death; and was actually in the field during the greatest part of the last 15 years of his life. This dereliction of his original empire and capital for nearly 30 years, occasioned various disorders in them, and laid the foundation of many more: among others, the second rebellion of the Rajpoots in Agimere; that of the Patans towards the Indus; and of the Jats, or Jates, in the province of Agra. This was the first time that the Jats appeared, otherwise than as banditti; since which, they

* The reader may find in the 49th note to Mr. Orme's Historical Fragments of the Mogul Empire, a letter written by Jeewan Sing, Rajah of Jaudipore, to Aurungzebe, expostulating with him on the unjust measures he was pursuing, with respect to the Hindoos. This letter breathes the most perfect spirit of philanthropy, and of toleration in matters of religion: together with the most determined resolution to oppose the meditated attack on the civil and religious rights of the Hindoos. The elegant translation of this letter was made by Sir Charles Boughton Rose.

grew up to be a considerable state: and at one time were of some consideration in the politics of upper Hindoostan.

Aurungzebe died in 1707, in the 90th year of his age, at Ahmednagur, in the Deccan; which he had fixed on for his residence when in winter quarters. Under his reign the empire attained its full measure of extent. His authority reached from the 10th to the 35th degree of latitude; and nearly as much in longitude: and his revenue exceeded 90 millions of pounds sterling, in a country where the products of the earth are about four times as cheap as in England. But so weighty a sceptre could only be wielded by a hand like Aurungzebe's: and we accordingly find, that in a course of 50 years after his death, a succession of weak princes and wicked ministers, reduced this astonishing empire to nothing.

Aurungzebe obviously foresaw the contests that would arise between his sons for the empire; and it has therefore been asserted, that he made a partition of it among them. This account, however, is not warranted by the memoirs of a nobleman of Aurungzebe's court, lately published in this country,* nor by the best living authorities that I have been able to consult. Two letters, written by Aurungzebe to two of his sons, a few days before his death, indicate no intention of dividing the empire; but express in doubtful terms, his apprehensions of a civil war.† He left behind him four sons: Mauzum, afterwards emperor, under the title of

* Memoirs of Eradur Khan, translated from the Persian by Capt. J. Scott, 1786. This valuable fragment of Mogul history, contains an account of the revolutions that happened in the Mogul empire, from the death of Aurungzebe in 1707, to the accession of Firokze, in 1712. It contains much curious matter; and fully develops the political character of a Mogul courtier.

† These letters are preserved in one of the notes to the above work (page 3), and furnish thus striking lesson to frail mortality; that, however men may forget themselves, during the tide of prosperity, a day of RECOLLECTION will inevitably come, sooner or later. Here we are presented with the dying confession of an aged monarch, who made his way to the throne by the murder of his brethren, and the imprisonment of his father: and who, after being in peaceful possession of it, persecuted the most inoffensive part of his subjects, either through bigotry or hypocrisy. Here we behold him in the act of resigning THAT, to obtain possession of which, he incurred his guilt; and presented to us a mere sinful man, trembling on the verge of eternity; equally deplored the past, and dreading the future. How small must his situation appear to him, when he says, "Whatever I look, I see nothing but the DIVINITY."

Bahader Shah; Azem, and Kaum Buksh, who severally contested the empire with their elder brother; and Achar, who 30 years before had been engaged in rebellion, and fled to Persia. The death of their father, was the signal of hostility between Mauzum and Azem; the former approached from Cabul, and the latter from the Deccan, and disputed the possession of the whole empire (for Azem had proposed a partition of it) with armies of about 300,000 men each. Near Agra it was decided by a battle, and the death of Azem; and Mauzum took the title of Bahader Shah. His title, before his accession, was Shah Aulum; by which name he is constantly mentioned in the Memoirs of Eradut Khan.

Bahader Shah reigned about five years, and was a prince of considerable ability, and great attention to business; but the convulsions with which his elevation had been attended (notwithstanding his pretensions, as eldest son of the late emperor), added to the various disorders that had taken root during Aurungzebe's long absence in the Deccan, had reduced the government to such a state of weakness, as required not only the exertion of the best talents, but also much time, to restore. The rebellion of his brother Kaum Buksh, soon after his accession, called him into the Deccan; and this being quelled by the death of Kaum Buksh, and the total dispersion of his followers, he wisely quitted this scene of his father's mistaken ambition; although the Deccan was far from being in a settled state. He had in contemplation to reduce the Rajpoot princes of Agimere, who had formed a very strong confederacy, to which the long absence of Aurungzebe had been too favourable; and they appeared to act with much confidence and security. However, an evil of a more pressing nature drew the emperor's attention to another quarter. The Seiks, a new sect of religionists, appeared in arms in the Lahore province; and ravaged the whole country from thence to the banks of the Jummah river. The Seiks had silently established themselves along the foot of the eastern mountains, during the reign of Shah Jehan. They differ from

most religionists, in that, like the Hindoos, they are perfectly tolerant in matters of faith; and require only a conformity in certain signs and ceremonies: but unlike the Hindoos, they admit proselytes; although those from among the Mahomedans are the least esteemed. They are now become one of the most potent states in Hindooostan. These, the emperor marched against in person, and after much trouble and delay reduced; but their chief escaped. The emperor then took up his residence at Lahore, and seems to have continued there a very long time: probably, to check the remnant of the party of the Seiks; and to settle the affairs of the province, in general. Here he died, after a short illness, in 1712: and, it would appear, that he never had an opportunity of visiting Agra, or Delhi, during his reign.

He also left four sons: among whom a war, for the succession, commenced on the spot. The second son, Azem Ooshawn, took possession of the treasures; but was opposed by his three brothers, who agreed to divide the empire among them. A battle, in which Azem was killed, decided matters in their favour; chiefly by the address and bravery of the youngest, Jehaun Shah; who seemed resolved to abide by the agreement, to divide the empire; and as a proof of his intention, directed the treasures to be divided. But Zoolfecar Khan, an Omrah in high trust, intrigued to prevent it; intending to raise to the throne, Jelhaunder Shah, who was the best fitted for his purposes. A second battle was fatal to Jelhaun Shah; and left his two remaining brothers to dispute the empire by a third battle; which left Jelhaunder, who was originally the eldest, in possession. He did not long enjoy his dignity; for at the end of nine months, he was dethroned by Feroksere (or Furrocksere), son of the deceased Azem Ooshawn; and of course, great grandson of Aurungzebe. The weakness and meanness of Jelhaunder, is almost without parallel, in the annals of kings:^{*} and gave occasion to

* His history is given in the abovementioned Memoirs.

the Syeds (or Seids) Houssein Ali Khan, and Abdella Khan, two brothers, and Oimrahs of great power, to set up Feroksere. Having been possessed of governments in the eastern provinces, their influence enabled them to collect an army, with which they defeated that of Jehaunder, near Agra, in the same year, 1712.

The Seiks appeared again in arms, during the following year: and in 1716, they were grown so formidable, that it appeared necessary to march the grand army against them, with the emperor at its head; but we are ignorant of the particulars of the campaign.

It was in this reign that the English East-India Company obtained the famous FIRMAS, or grant, by which their goods of export and import were exempted from duties, or customs; and this was regarded as the Company's COMMERCIAL CHARTER IN INDIA, while they stood in need of protection, from the princes of the country.

In the year 1717, Feroksere was deposed, and blinded by the Seids: who raised to the throne Ruffieh-ul-Dirjat, a son of Bahader Shah. Both this emperor and his brother, Ruffieh-al-Dowlat, were, in the course of a year, raised to the throne; and afterwards deposed and put to death by the Seids; who had now the disposal of the empire and all its concerns. Thus, in 11 years from the death of Aurungzebe, five princes of his line, who had mounted the throne, and six others who had been competitors for it, had been disposed of: and the degraded state of the regal authority, during this period, had introduced an incurable anarchy, and a disposition in all the governors of provinces, to shake off their dependency on the head of the empire. From this time, affairs declined very rapidly: and the empire, which had acquired some degree of consistency under the house of Timur, was now about to be dismembered, in a degree beyond what it had experienced, even before the era of the Mahomedan conquests.

Mahomed Shah, grandson of Bahader Shah, was placed on the throne by the Seids, in 1718. This prince, warned by the fate of

his predecessors, and having very early in his reign, acquired power sufficient for the purpose, got rid of the Seids: but not without a rebellion and a battle.

Nizam-al-Muluck, Viceroy of the Deccan, had for some time been rising into power; and the times being favourable, he meditated independency. He had received some affronts from the Seids, which furnished him with an excuse for withdrawing to his government: from whence, in 1722, he was invited to court, and offered the post of vizier. This offer, however, he declined, as not suiting his projects; which had for their object, sovereignty, instead of ministry; in the Deccan, at least. The Mahrattas too, whose power had progressively increased, and who even held their ground against so martial and persevering a prince as Aurungzebe, were, as might be expected under a succession of weak ones, grown truly formidable to the rest of the empire: and their vicinity to the Nizam, afforded him a complete pretence for increasing his army. When the princes of the house of Timur were so eagerly pursuing the conquest of the Deccan, it seems to have escaped their penetration, that this region, which possessed ample resources within itself, and innumerable local advantages in point of security, from an enemy without, was also situated at such a distance from the capital, as to hold out to its viceroy the temptation of independence, whenever a favourable opportunity might offer. Perhaps, if the Deccan had been originally left to itself, the posterity of Timur might still have swayed the sceptre of Hindoostan.

While the Nizam continued so formidable in the south, the Mahrattas directed their attacks against the middle and northern provinces. Malwa and the open parts of Agimere were over-run by them: and their detachments insulted even the capital of the empire. The weak Mahomed had in the early part of his reign endeavoured to satisfy their demands, by paying them a tribute amounting to one-fourth of the net revenue of the invaded provinces: but this, as might have been foreseen, only increased

their insolence; and ended in their seizing on the provinces themselves.

In 1738, the Nizam, confident of his interest with a powerful faction at court, came thither, attended by a large body of armed followers. Dowran, the commander in chief of the army of the empire, was at the head of the court party; which the Nizam finding too strong, to be easily dispossessed of their places, he invited Nadir Shah, the usurper of the Persian throne, and who was then engaged in the siege of Candahar, to invade Hindoostan: hoping that he and his faction might get rid of Dowran; or at any rate, that they might profit by the confusion it would occasion. Many thought that the Nizam's views extended to the empire itself. Accordingly, in the following year, Nadir Shah entered Hindoo-stan, and advanced to the plains of Carnawl, where Dowran had assembled the army, but was soon after killed in a skirmish. So uncertain was the state of things even at this time, that Nadir Shah offered to evacuate the empire for fifty lacks of rupees (half a million). But the intrigues of the Nizam and his party, occasioned the weak emperor to throw himself on the clemency of the invader; who entered Delhi, and demanded 30 millions sterling, by way of ransom. Tumults, massacres, and famine, were the result: 100,000 of the inhabitants were massacred, and 62 millions of plunder were said to be collected. Nadir married his son to a granddaughter of Aurungzebe, restored Mahomed Shah to his throne, and returned to Persia, after obtaining the cession of all the countries subject to Hindoostan, lying on the west of the Indus.

His departure left the Nizam in possession of the whole remaining power of the empire: which he sacrificed to his own views in the Deccan, where he established an independent kingdom for himself. The Mahratta invasions of the Carnatic in 1740, and 1741, and particularly the defeat and death of Doast Ally (Nabob of Arcot) by their arms, called the Nizam home; after delegating his power at court, to his eldest son Gazi o'dien.

The Nizam, on his arrival, settled the Carnatic for the present, by placing Anwar o'dien, father of the present Mahomed Ally, in the government, or nabobship of Arcot; which was then understood to comprehend nearly the present Carnatic.

Bengal became independent of Delhi a little before this time (1738), under Aliverdy Cawn; and not long after, a vast army of Mahrattas, both from Poonah and Berar (for they were now divided into two states) invaded it, under the sanction of the emperor's name; who being at a loss to satisfy their repeated demands, sent them to collect for themselves the arrears of revenue since the defection of Aliverdy. About the same time the Rohillas, a tribe from the mountains that lie between India and Persia, erected an independent state on the east of the Ganges, and within 80 miles of Delhi. Very strong symptoms of the universal dissolution of the empire appeared at this time.

Nadir Shah died in 1747; and in the confusion that followed, Abdalla, one of his generals, seized on the eastern part of Persia, and on the bordering provinces of India, that were ceded by Mahomed Shah to Nadir; and these he formed into a kingdom, known at present by that of Candahar; or more familiarly by the country of the *Abdalli*. It comprises nearly the ancient empire of Ghizni.

Mahomed Shah died the same year, having reigned 29 years: a long period, considering the fate of his immediate predecessors, and the state of anarchy that prevailed so universally in Hindoostan.

Ahmed Shah, son of Mahomed, succeeded his father. In his reign, which lasted about 6 years, the entire division of the remainder of the empire took place: nothing remaining to the house of Timur, save a small territory round Delhi, together with the city itself (now no longer a capital), exposed to repeated depredations, massacres, and famines, by the contests of invaders. The last army that might be reckoned *imperial*, was defeated by the Rohillas, in 1749; by which their independency was firmly established in the

eastern part of the province of Delhi. The Jates, or Jats, a Hindoo tribe under Soorage-Mull, established themselves, and founded a state in the province of Agra. The Deccan and Bengal we have already seen usurped by their viceroys, the Nizam and Aliverdy: Oude was seized on by Seifilar Jung (father to the late Sujah Dowlah, and grandfather to the reigning Nabob of Oude, Azuph Dowlah): Allahabad by Mahomed Kooli: Malwa was divided between the Poonah Mahrattas, and several native princes, and zemindars. Agimere reverted of course, to its ancient lords, the Rajpoot princes: and the Mahrattas, who had of late been making large strides towards universal plunder, if not to universal empire, possessed, in addition to their share of Malwa, the greatest part of Guzerat, Berar, and Orissa; besides their ancient domains in the Deccan: and were alternately courted and employed by different parties, and were become the Swifts of India; with this deviation from the custom of the European Swifts, that they usually paid themselves, instead of being paid by their employers. Abdalla, as has just been said, having established his new kingdom very early in this reign, entered Lahore and Moultan (or the Panjab) with a view to the conquest of them. The whole country of Hindooostan proper, was in commotion from one extreme to the other; each party fearing the machinations or attacks of the other; so that all regular government was at an end, and villainy was practised in every form. Perhaps, in the annals of the world, it has seldom happened that the bonds of government were so suddenly dissolved, over a portion of country, containing at least 60 millions of inhabitants.

The Nizam died at a very advanced age,* in 1748, and was succeeded by his son Nazirjung, in prejudice to the rights of his eldest son, Gazi, vizier to the nominal emperor. The contests that followed soon after, between Nazirjung and his nephew

* He was 104 years old. He left five sons; Gazi o'dies, Nazirjung, Salabidjung, Nizamally (the present soubah of the Deccan, and the only survivor) and Bazalet Jung.

Muzzaffer Jung, for the throne of the Deccan; and between the families of Anwar o'dien and Chunda Saheb, for the nabobship of Arcot, one of its provinces, occasioned the French and English to engage as auxiliaries in the wars that happened in consequence of them. In the first, the French alone interfered: in the latter, both nations; the English espousing the cause of the family of Anwar o'dien. These wars lasted till the year 1754; and ended, after much bloodshed by battle and assassination, in fixing Mahomed Ally, second son of Anwar o'dien, in the government of Arcot; and Salabidjung, son of the late Nizam-al-Muluck, in the soubahship of the Deccan: the original disputants being either assassinated, or killed in battle. By this result, the English gained the point of establishing their security, and their influence, in the Carnatic: and the French, in addition to the solid advantage of getting posseſſion of the northern circars,* valued at half a million sterling of annual revenue, gained the splendid but uncertain privilege of influencing the councils of the Nizam, by attending his person with their army, commanded by the celebrated M. Bussy.

The Mogul empire was now become merely nominal: and the emperors must in future be regarded as of no political consequence, otherwise than as their names and persons were made use of, by different parties, to forward their own views. That the name and person of the emperor were of use, as retaining a considerable degree of veneration among the bulk of the people, in Hindoostan and the Deccan, is evident, from the application made at different times for grants of territory, forcibly acquired by the grantee, but which required the sanction of the lord paramount, in order to reconcile the transaction to the popular, or perhaps, vulgar opinion. Thus every usurper has endeavoured to sanctify his usurpation, by either a real or pretended grant from the emperor: and others,

* The geographical position of the circars, and the origin of the application of the term *northern*, to them, will be found in the latter part of this Introduction.

by obtaining possession of his person, have endeavoured to make their acts pass for his. Another remarkable instance of the effect of popular opinion, is, that the coin throughout the whole tract, known by the name of the Mogul Empire, is to this day, struck in the name of the nominal emperor.

In 1753, the Emperor Ahmed was deposed by Gazi,* after having reigned about 6 years. In the preceding year, the Mahrattas had been called in, to assist in reducing the Jats, who were in possession of Agra, and become troublesome neighbours to the emperor: and in the present year, the Berar Mahrattas established themselves in Orissa, by cession from Aliverdy, Nabob of Bengal: who was also compelled, for a short time, to pay them a tribute for Bengal and Bahar: amounting to one-fourth of the clear revenue. This, together with the Mogul's former permission to collect the arrears of revenue due to him, is the foundation of their claims on Bengal and Bahar; and which they have never relinquished, although the times may have been unfavourable to their asserting them.

Allumguire II. grandson of Bahader Shah, was placed on the nominal throne by Gazi, with the concurrence of Nidjib Dowlah, a Rohilla chief, and commander of the army. Abdalla of Candahar, was at this time in possession of Lahore, and threatened Delhi. In 1756, the emperor, to get rid of Gazi, invited Abdalla to Delhi; who accordingly came, and laid that unfortunate city under heavy contributions; not even sparing the sepulchres of the dead: but being baffled in his attempt on Agra (held by the Jats) he proceeded no farther eastward, but returned towards Persia, in 1758. The emperor and his family were now reduced to the lowest possible state of royalty: alternately soliciting the assistance

* It is necessary to observe, that the Gazi often in question, is not the person whom we have seen before, in the capacity of vizier to Mahomed Shah; but his son. But this is the Gazi, who is so famous, or rather infamous, for assassinations and crimes, of almost every kind. The elder Gazi perished in an attempt to recover the possession of the Deccan from his younger brother Salabidung, in 1752.

of Abdalla, and of the Mahrattas; and as much in dread of their allies, as of their enemies.

In 1760, Allumguire was deposed and murdered by Gazi. His son, the present emperor, who took the title of Shah Aulum, was then engaged in a fruitless attempt to reduce the Bengal provinces. He had successively thrown himself, on the Mahrattas, Nidjib Dowlah, and Sujah Dowlah, for protection and assistance; but without success. Mahomed Kooli of Allahabad, however, received him: and it was by means of an army furnished by that chief, and by Bulwantsing, zemindar of Benares, that he was enabled to enter the Bengal provinces, where he was joined by some refractory zemindars of Bahar, and made up altogether a force of about 60,000 men: but notwithstanding his numbers, they were so ill provided, that he ended his expedition (in 1761) by surrendering himself to the British (who had taken the field as allies to the Nabob of Bengal): and they, having at that time no inducement to connect their fortunes with his, he applied with more success to Sujah Dowlah, who, in Mahomed Kooli's absence, had seized on Allahabad.

Abdalla had visited Hindoostan no less than 6 times during the late reign; and appeared to have much more influence in the empire than Allumguire had. His sixth visit, was in 1759 and 1760; when Delhi was again plundered and almost depopulated; although during the time of Aurungzebe, it was supposed to contain two millions of souls.

The Mahrattas in the midst of these confusions and revolutions, daily gathered strength. We find them engaged in every scene of politics and warfare from Guzerat to Bengal; and from Lahore to the Carnatic. Possessed of such extensive domains and vast armies, they thought of nothing less than driving out Abdalla, and restoring the Hindoo government throughout the empire. Thus the principal powers of Hindoostan were arranged in two parties; the Hindoos and Mahomedans: for the Jats joined the Mahrattas;

and Sujah Dowlah, with the Rohillas, and other Mahomedan chiefs of less note, joined Abdalla: and a battle ensued in the old scene of warfare, the plains of Carnawl and Panniput. There were said to be 150,000 Mahomedans, and no less than 200,000 Mahrattas, whose cause the Jats deserted, before the battle. This was the most important struggle that had taken place, since the contests between Aurungzebe's sons, in 1707. Victory declared for Abdalla, after a battle more obstinate and bloody than any that the records of Hindooostan can probably shew: the carnage of the day, and the number of Mahratta prisoners taken, were almost incredible; and great deeds of valour were performed on both sides. This battle was decisive of the pretensions of the Mahrattas, to universal empire in Hindooostan. They lost the flower of their army, together with their best generals: and from that period (1761) their power has been sensibly on the decline.

Abdalla's influence at Delhi was now unlimited; and he invited Shah Aulum thither (then engaged in Bahar, as abovesaid) promising to seat him on the throne of his ancestors. He, however, did not venture to trust himself in the hands of Abdalla: who therefore, as his presence was required in Lahore, where the Seiks were on the point of overpowering his garrisons, set up Jewan Buckt,* the son of Shah Aulum, for emperor, under the tuition and protection of Nidjib Dowlah: from whom he exacted an annual tribute. Thus, in fact, Abdalla became Emperor of Delhi: and if his inclinations had led him to establish himself in Hindooostan, it is probable that he might have begun a new dynasty of emperors in his own person. He meant, probably, at some future time, to pursue his designs, whatever they were, either for himself or for the heir of the house of Timur, to which he had allied himself by a match with one of the princesses. His son and

* This is the person who visited Mr. Hastings at Lucknow, in 1784. He was about 13 years old at the time of Abdalla's last visit to Delhi.

successor, the present Timur Shah, married another princess of the same line.

After the departure of Abdalla, it appears that all the territory remaining to Nidjib Dowlah, for himself and the young emperor, was the northern part of the province of Delhi. In the following year, 1762, both the Jats and Mahrattas pressed hard on Nidjib Dowlah, but he either baffled them, or bought them off; and held his ground during his lifetime: and then transmitted his country, which is chiefly situated between the Ganges and Jumna, to his son Zabeta Cawn, the present possessor.

Shah Aulum, the legal emperor (whose son we have just seen in the character of his father's representative), was without territory, and without friends, save only a few Omrahs who were attached to his family; and were, like him, dispossessed of their property and station. The expulsion of the Nabob of Bengal, Cossim Ally, by the English, in 1763, by drawing Sujah Dowlah into the quarrel, was the means, once more, of bringing the wandering emperor into notice. But he had more to hope from the success of the British arms, than those of his patron, Sujah Dowlah: and the uninterrupted success that attended them in 1763, 64, and 65, by the dispersion of the armies of Cossim Ally, and of Sujah Dowlah, and by the entire conquest of Oude and Allahabad; left both the emperor and Sujah Dowlah no hopes, but from the moderation of the victors. Lord Clive, who assumed the government of Bengal in 1765, restored to Sujah, all that had been conquered from him, except the provinces of Corah and Allahabad; which were kept as part of an establishment for the emperor: at the same time he obtained from the same emperor, a grant of the provinces of Bengal, Bahar, and Orissa, together with the northern circars, on condition of paying the emperor 26 lacks of rupees (260,000l.) per annum, by way of tribute, or quit rent. The Corah provinces were valued at 30 lacks more. Thus was a provision made for the emperor, and a good bargain struck for the English; for Bengal

and the circars might be estimated at a million and a half net revenue, after the charges of the civil and military establishments were paid. The emperor was to reside at the city of Allahabad; and was, in effect, under the protection of the English, to whom he owed all that he possessed. A treaty offensive and defensive was entered into with Sujah Dowlah, Nabob of Oude: and his territories being situated so as to form a barrier to ours, a competent force stationed within them, served to guard both at the same time; and it was convenient to the possessor of Oude, to pay the expence of it, as if it had been retained for his service only.

It was, however, the misfortune of the emperor, that he could not accommodate his mind to the standard of his circumstances, although these were far more favourable now, than at any other period of his life. But being the lineal descendant of the house of Timur, he aspired to possess the capital city of his ancestors; and in grasping at this shadow, he lost the substance of what he already possessed. For after about 6 years quiet residence at Allahabad, he put himself into the hands of the Mahrattas, who promised to seat him on the throne of Delhi: those very Mahrattas, who had wrested the fairest of his provinces from his family, and whose object was to get possession of the rest; and who intended to use his person and name, as one of the means of accomplishing it. A cession of the Corah provinces to the Mahrattas, was the immediate consequence of this connexion: and had not the English interposed, the Mahrattas would have established themselves in that important angle of the Dooab, which commands the navigation of the upper part of the river Ganges, and the whole course of the Jumnah, and which would have brought them almost close to our doors; besides the evil of extending their influence and power, and of feeding their hopes of extending them still further. The principle on which the British government acted, was this: they considered the Corah, &c. provinces, which by right of conquest were originally theirs, as having reverted again to them, when they

were alienated from the purposes for which they had been originally granted to the emperor; and applied to the purpose of aggrandizing a power, which was inimical to them and to their allies. They therefore took possession of those provinces again, and immediately ceded them to the Nabob of Oude, for a valuable consideration. Indeed, it was a mistake originally, not to restore the possession of them to Sujah Dowlah, in common with the rest of his territories; and to settle a certain stipend in lieu of them, to the emperor: for they, forming the frontier towards the Mahrattas and Jats, should have been placed in hands that were better able to defend them.

The Mogul, however, went to Delhi; thereby losing all that he had acquired from the British; and has ever since been a kind of state prisoner; living on the produce of a trifling domain, which he holds by a tenure of sufferance; allowed him partly out of veneration for his ancestors, and partly for the use of his name. It must be allowed, that the princes of Hindoostan have generally shewn a due regard to the distresses of fallen royalty (when life has been spared) by granting jaghires, or pensions. Ragobah's, is a case in point. The private distresses of Shah Aulum (it is almost mockery to call him the Great Mogul, or Emperor) were, however, so pressing, during Mr. Hastings's last journey to Oude (1784), that his son Jewan Buckt came to solicit assistance from the English. Since the peace of 1782, Madajee Sindia, a Mahratta chief, and the possessor of the principal part of Malwa, has taken the lead at Delhi; and has reduced several places situated within the districts formerly possessed by the Jats, Nudjuff Cawn, and the Rajah of Joinagur: and it may be concluded that Sindia has in view to extend his conquests on the side of Agimere: and to establish for himself a considerable state, or kingdom.

It might be expected that the Rajpoots of Agimere, &c. would be less averse to receiving a sovereign of their own religion, than they were to submit to the Mahomedan emperors: and, more-

over, that it would be more for the interest of their people to be subjects, than tributaries, of the Mahrattas; these being mild as governors, although the most unfeeling, as collectors of tribute, or as enemies: yet it appears that they entertain the greatest jealousy of Sindia's designs; the accomplishment of which would make their princes sink into a state of greater insignificance than they are at present.

In a country so fruitful of revolutions, it is difficult to foresee the event of Sindia's present measures; but they point strongly towards raising him to the head of the western Mahratta state, or to that of a new empire founded on its ruins. The provinces of Agra and Delhi, and that whole neighbourhood, are in the most wretched state that can be conceived. Having been the seat of continual wars for near 50 years, the country is almost depopulated, and most of the lands, of course, are lying waste: the wretched inhabitants not daring to provide more than the bare means of subsistence, for fear of attracting the notice of those, whose trade is pillage. Nothing but the natural fertility of the soil, and the mildness of the climate, could have kept up any degree of population; and rendered the sovereignty of it, at this day worth contending for. So that a tract of country which possesses every advantage that can be derived from nature, contains the most miserable of inhabitants: so dearly do mankind pay for the ambition of their superiors; who, mis-calculating their powers, think they can govern as much as they can conquer. In the Mogul empire, many parts of it were 1000 miles distant from the seat of government; and accordingly its history is one continued lesson to kings, not to grasp at too much dominion; and to mankind, to circumscribe the undertakings of their rulers.

It is highly improbable that the house of Timur will ever rise again, or be of any consequence in the politics of Hindoostan. It was in 1525 that the dynasty of Great Moguls began: so that reckoning to the present time (1788), it has lasted 262 years: a long period for that country.

SKETCH of the MAHRATTA History.

We have frequently had occasion, in the course of the above sketch, to mention the MAHRATTAS; and as the rise and progress of that state is of much importance to the general history of the decline of the Mogul empire; and so remarkable in itself, from the suddenness of its growth; it may not be improper to give a short history of it, in an uninterrupted narrative; although some part of the former one may be repeated.

The origin and signification of the word MAHRATTA (or MARRATTOE) has of late been very much the subject of inquiry and discussion, in India: and various fanciful conjectures have been made concerning it. We learn, however, from Ferishta,* that MARRAT was the name of a province in the Deccan; and that it comprehended Baglana (or Bogilana) and other districts, which at

* This information occurs not only in Ferishta's history of Hindoostan, but in that of the Deccan, &c. likewise. The former we have before spoken of, as being translated by Col. Dow: but the latter has never yet made its appearance in any European language. It is expected, however, that the public will soon be in possession of it, from the hands of Capt. Jonathan Scott, who has already exhibited a specimen of one part of his intended work; and has engaged to complete it, on conditions, which the public, on their part, appear to have performed. Ferishta lived in the court of Ibrahim Audil Shah, King of Viziapour; who was cotemporary with Jehangir in the beginning of the last century. Ferishta's history of the Deccan, &c. opens to our view the knowledge of an empire that has scarcely been heard of, in Europe. Its emperors of the BAHAMINEAH dynasty (which commenced with Hassan Caco, A.D. 1347) appear to have exceeded in power and splendour, those of Delhi; even at the most flourishing periods of their history. The seat of government was at Calberga (see Orme's Historical Fragments, p. cxxxvi.) which was central to the great body of the empire; and is at this day a considerable city. Like other overgrown empires, it fell to pieces with its own weight: and out of it were formed four potent kingdoms, under the names of Viziapour (properly Bejapour), Golconda, Berar, and Amednagar; whose particular limits and inferior members, we are not well informed of. Each of these inhabited with a considerable degree of power, until the Mogul conquest; and the two first, as we have seen above, preserved their independency until the time of Aurungzebe. It is worthy of remark, that the four monarchs of these kingdoms, like the Caesars and Ptolemies, had each of them a name, or title, common to the dynasty to which he belonged; and which were derived from the respective founders. Thus, the kings of Viziapour, were styled Audil (or Adil) Shah; those of Golconda, Cutub Shah; and those of Berar and Amednagar, Nizam Shah, and Amud Shah. A.

present form the most central part of the Mahratta dominions. The original meaning of the term Marhat, like that of most other proper names, is unknown; but that the name of the nation in question, is a derivative from it, cannot be doubted: for the testimony of Ferishta may be received without the smallest suspicion of error, or of design to establish a favourite opinion; when it is considered that he wrote, at a period, when the inhabitants of the province of MARHAT did not exist as an independent nation; but were blended with the other subjected Hindoos of the Deccan. Besides the testimony of Ferishta, there is that also of Nizam-ul-Deen,* an author who wrote at an earlier period; and who relates, in his general history of Hindooostan, that one of the kings of Delhi, made an excursion from Deogur (Dowlatabad) *into the neighbouring province of MARHAT.*†

Sevajee may be considered as the founder of the MAHRATTA EMPIRE. His ancestry is not very clearly ascertained; but the most commonly received opinion, is, that his grandfather was an illegitimate son of a RANA of Oudipour, the chief of the Rajpoot princes; the antiquity of whose house may be inferred from *Ptolemy.* (See the Memoir, page 290.) The mother of this illegitimate son is said to have been an obscure person, of a tribe named *Bonsola* (sometimes written Bouncello, and Boonsla), which name was assumed by her son, and continued to be the family name of his descendants, the Rajahs of Sattarah, and Berar. Having, after the death of his father (the Rana of Oudipour) suffered some indignities from his brothers, on the score of his birth, he retired in disgust to the Deccan, and entered into the service of the King of Bejapour (vulgarly Visiapur). The reputation of his family, added to his own personal merit, soon obtained for him a distin-

* Nizam-ul-Deen was an officer in the court of Acbar; and wrote a general history of Hindooostan, which he brought down to the 40th year of that emperor.

† This also occurs in Ferishta's history of Hindooostan. It was in the reign of Alla I. A. D. 1312. See also page lii of the Introduction.

guished rank in the armies of the King of Visiapour, in which he was succeeded by his son. But his grandson, Sevajee, who was born in 1628, disdaining the condition of a subject, embraced an early opportunity (which the distractions then existing in the Visiapour monarchy, afforded him) of becoming independent. So rapid was the progress of his conquests, that he was grown formidable to the armies of the Mogul empire, before Aurungzebe's accession to power; having, before that period, seized on the principal part of the mountainous province of Baglana, and the low country of Concan, situated between it and the western sea. He had also acquired from the kingdom of Visiapour, the important fortrefs of Pannela, which commanded an entrance into the heart of it, from the side of Baglana; together with several other places of strength. In the Carnatic he had posseſſion of Gingee, together with an extensive district round it: * and this perhaps may be considered rather as an usurpation of one of the Visiapour conquests, than as an acquisition made from the original sovereign of the Carnatic: for the King of Visiapour appears to have posſefſed the southern part of the Carnatic, including Tanjore. + Great part of the history of Sevajee will be found in Mr. Orme's Historical Fragments of the Mogul Empire, and is well worth the reader's attention. At his death, which happened in 1680, his domains extended from the northern part of Baglana, near Surat, to the neighbourhood of the Portuguese districts of Goa, along the sea coast; but probably not very far inland, beyond the foot of the Gauts, and other ranges of mountains, which may be considered as branches of them; for Aurungzebe's army kept the field in Visiapour at that period, and necessarily straitened Sevajee's quarters on that side. These

* The French obtained the grant of Pondicherry in 1674, from a Rajah of Gingee, who acknowledged the King of Narsinga as his superior; but this latter was, at the same time, dependent on Visiapour. Sevajee took possesion of Gingee about the year 1677, and confirmed the above grant in 1680.

+ I am ignorant of the period when the Mahratta prince, whose descendants now hold Tanjore, came into the poſſeſſion of it.

conquests were the fruits of hardy and persevering valour; partly acquired in despite of Aurungzebe, then in the zenith of his power. Sevajee had also plundered Surat and Golconda; and even attacked Goa, when the Portuguese power was at its height. His son Sambajee, though possessed of considerable ability both as a statesman and a soldier, fell a sacrifice to debauchery. In one of his loose excursions he was treacherously seized on, and cruelly put to death by Aurungzebe, in 1689. This, however, produced no submission on the part of the Mahrattas, who still increased in power, though not so rapidly as before. The Roman state had scarcely a harder infancy; and the mountains of Gatte, which shelter from the stormy monsoon the countries that are situated to the leeward of them, afforded also a shelter to this rising state.

Sahoo, or Sahoojee (vulgarly, Saow, or Sow Rajah), succeeded his father Sambajee, at a very early age; and as he inherited the ability and vigour of mind of his immediate ancestors, and reigned more than 50 years, great part of it at a season the most favourable for the aggrandizement of a state that was to rise on the ruins of another, the Mahratta power grew up to the wonderful height that we have beheld it at. For the confusions occasioned by the disputed succession among Aurungzebe's sons, and their descendants, opened a wide field to all adventurers; and particularly to this hardy and enterprizing people, bred in the school of war and discipline, and who had shewn themselves able to contend even with Aurungzebe himself. The conquests achieved under Sahoojee, are astonishing to those who do not know that Hindooostan is so full of military adventurers, that an army is soon collected by an enterprising chief, who holds out to his followers a prospect of plunder; which the then distracted state of the empire afforded the most ample means of realizing. At the time of Sahoojee's death, which happened in 1740, the Mahratta state or empire had swallowed up the whole tract from the western sea to Orissa; and from Agra to

the Carnatic: and almost all the rest of Hindoostan, Bengal excepted, had been over-run and plundered. They were engaged in almost every scene of war and politics, throughout the whole country; although it does not appear that they took any part in the contest between Nadir Shah and Mahomed, in 1738-9; except by availing themselves of the absence of Nizam-al-Muluck, to commit depredations on his territories in the Deccan. Probably they thought that more advantage would arise to them, from the disorders consequent on Nadir Shah's invasion, than by their assisting the emperor in repelling him: we are also to consider the advanced age of Sahoojee, at that time.

It is difficult to trace the progress of the Mahratta conquests, according to the order of time, in which they were made. We find them taking part in the disputes between Aurungzebe's descendants at Delhi, as early as 1718: but it was not till 1735, that they found themselves strong enough to demand a tribute from the emperor, Mahomed Shah. This demand terminated, as we have before observed, in the acquisition of the greatest part of the fine province of Malwa; and in a grant of a fourth, part of the net revenues of the other provinces in general. This proportion being named in the language of Hindoostan, a CHOUT, occasioned the future demands of the Mahrattas to be denominated from it: although they are by no means limited to that proportion, except in cases where an express compact has taken place: as in some instances, between the Berar Mahrattas and the present Nizam of the Deccan. They also, about the year 1736, took part in the disputes between the Nabobs of Arcot, in the Carnatic; within which district, the principal European settlements on the coast of Coromandel, are situated: which disputes eventually engaged the French and English East-India Companies, in scenes of hostility for several years, as has been before observed.

Ram Rajah, who succeeded Sahoojee, in 1740, was a weak prince: and it happened in the Mahratta state, as in all despotic

states of rapid growth, and recent formation, that great part of what was gained by the ability of one despot, was lost by the imbecility of another. The two principal officers of the state, the *Paisiwah*, or minister, and the *Bukshi*, or commander in chief, agreed to divide the dominions of their master: Bajirow, the paishwah, assuming to himself the government of the western provinces; and Ragojee, the bukshi, the eastern provinces: the former continuing at Poonah, the ancient capital; the other fixing his residence at Nagpour in Berar.

The paishwah is said to have confined the Ram Rajah to the fortrefs of Sattarah (about 50 miles from Poonah) and then administered the government in his name. It is more probable, from other accounts, that Sahoojee, during the latter part of his reign, had, by a long and unrevoked delegation of power to the paishwah, prepared the minds of the people for this measure; which, to them, hardly appeared to be a change: as Sahoojee, in a manner, shut himself up in Sattarah, and seldom appeared in any act of government. There is some degree of analogy between this part of the history of the paishwahs, and that of the mayors of the palace, in France.

So violent a partition of the empire by its ministers, encouraged, as might be expected, the usurpations of others, according to the degree of power, or opportunity, possessed by each: so that in the course of a few years, the state became, from an absolute monarchy, a mere confederacy of chiefs; and the loosest example of feudal government in the world. The two chiefs of the divided empire pursued each their plans of conquest, or negociation, separately; on the general principle of respecting each others rights. The local situation of the Berar chief, who was less powerful than the other, led him to a close connexion with the Nizam; though not professedly in opposition to the Poonah chief.

The invasion of Bengal (of the causes of which we have spoken in page lxix) was undertaken by both the Mahratta states in 1742,

and 1743, with armies said to contain 80,000 horsemen each. The leaders of these armies appearing each to act for himself, the consequence was, that the wily Aliverdy found means to bribe one party, and to sow dissensions between both; by which the consequences were less dreadful to the Bengallers, than they otherwise must have been. Still, however, they are remembered with horror: and I have myself beheld many of the objects of their wanton barbarity, mutilated and defaced. As 160,000 horsemen were let loose over the level country on the west of the Ganges; and the capital, Moorshedabad, being 12 miles from that river, it was cut off from all supplies of provisions and necessaries,* until Aliverdy doubly intrenched the road leading from the city to the Ganges; and thus, supplies were conveyed in safety to the city, which was inclosed by another intrenchment, or rampart, of about 18 miles in circumference. The Mahrattas did not depart out of the provinces until the year 1744, when they had collected a vast mass of plunder, and had established the claim of the *chout*; which, however, was never regularly paid. The Berar Mahrattas having, some years afterwards, obtained possession of the Orissa province, partly by conquest, partly by cession from Aliverdy, their proximity to Bengal, from which they were separated only by a shallow river, afforded them frequent opportunities of plundering its frontier provinces: and it was not till the year 1761, when Cossim Ally, Nabob of Bengal, ceded the provinces of Burdwan and Midnapour to the English, that the Mahrattas ceased to plunder them. The demand of the *chout*, however, although made occasionally, previous to the cession of Bengal to the English, had never been enforced: and during the war of 1780, when almost all the powers of Hindooostan were leagued together against the English, it was very feebly, if at all, insisted on, although the Berar Rajah had an army at Cattack.

* The city of Moorshedabad is situated on the westernmost branch of the Ganges: which branch is navigable only during a part of the year. See the Appendix.

The administration of Bajirow was as vigorous as could possibly be expected, considering how the reins of government had been slackened: to the Mahratta empire, it was glorious; for he wrested out of the hands of the Portuguese, the fortress of Bafseen, and the island of Salsette, near Bombay; places that stood in the next degree of importance to Goa. He died in 1759, leaving the paishwahship, which was now considered as an hereditary establishment, to his son Ballajee.

At this period the Mahrattas pushed their conquests into the Panjab, and even to the banks of the Indus. But the time was approaching, when this sudden elevation (which seems, in some instances at least, to operate in states as in individuals) was to serve only to make their downfall more conspicuous. They and Abdalla had given each other mutual umbrage; and the wars that ensued between them, which ended with the famous battle of Panniput, of which we have already given an account in page lxxiv, was decisive of the pretensions of the Mahrattas as Hindoos, to universal empire in Hindooostan; which they at that time (1761) found themselves strong enough to dispute with the Mahomedans.

Ballajee died soon after. To him succeeded his son Maderow, a youth. The Mahrattas had now abated of their ardour for distant expeditions, and their quarrels were chiefly with their neighbour, the Nizam; whom they by degrees stripped of a considerable portion of his territories on the north and west of Aurungabad. Maderow died in 1772; and was succeeded by his son Narain Row, who was murdered the following year by Ragobah, his uncle, and son of Bajirow, the first paishwah who assumed the sovereignty. The atrocity of this crime, made the author of it (who had been a general of reputation in the war against Hyder Ally, and the Nizam) detested by the body of the people, and caballed against by the chiefs: he besides failed in the object of clearing his way to the paishwahship, for the widow of Narain produced a boy, who was acknowledged heir.

Ragobah, who stood in need of allies, had engaged the government of Bombay in his cause; with whom a treaty, very advantageous to the English, and indeed, embracing the principal advantages so long desired by the East-India Company, was entered into; and the fleet and army belonging to the Presidency of Bombay, were accordingly put in motion, to second the views of Ragobah, and to secure the advantages derived from the treaty. Hostilities were commenced both by sea and land; and the island of Salsette, separated from Bombay only by a narrow channel of the sea, was taken possession of by the English. This was a most desirable acquisition, as the settlement of Bombay possessed no territory beyond the extent of the small island in which it is situated; and consequently depended on foreign supplies for its subsistence.

About this time the Council General of Bengal was invested with a controlling power over the other settlements in India: and the Mahratta war not meeting their approbation, Col. Upton was sent to Poonah in 1776, to negotiate a peace (since known by the name of the treaty of Pooroondar), by which Ragobah was to renounce his pretensions, and to receive a pension for life; and the English were to retain possession of Salsette. But in the end of 1777, the Bombay government again espoused the cause of Ragobah, which measure terminated in a disgraceful convention, by which the Bombay army retired to their settlement, and Ragobah surrendered to his enemies. Being of Bramin race, his life was spared.

The war that followed between the English and the Mahrattas, was purely defensive on the part of the latter; after the arrival of a brigade of the Bengal army, under General Goddard; and was attended with the conquest, on the part of the English, of the finest parts of Guzerat, and the Concan; including the important fortresses of Basseen and Amedabad; in short, of the whole country from Amedabad to the river Penn; and inland, to the foot of the

Gauts: and on the side of Oude, the province of Gohud, and other districts, together with the celebrated fortres of Gwalior, were reduced; and the war was carried into the heart of Malwa. But the expences of a successful war may be too grievous to be borne: and as a war with Hyder Ally had broke out in 1780, and still continued, it was justly esteemed a most desirable advantage to effect a peace with the Mahrattas, after detaching Sindia, the principal member of that state, from the confederacy. This peace was negociated in 1782 and 1783, by Mr. David Anderson, whose services on that memorable occasion, claim, as is said in another place, the united thanks of Great Britain and Hindoostan. All the acquisitions made during the war were given up, save Salsette, and the small islands situated within the gulf formed by Bonibay, Salsette, and the continent.

The government at Poonah, during the minority, was shared among a junto of ministers: and it is probable that so long a minority, may yet make some essential changes in the constitution of a state, so accustomed to revolutions in the superior departments of its government. The present paishwah, by name Maderow (son of Narain Row, as beforementioned), was born in 1774.

The eastern Mahratta state, or that of Berar, under Ragojee, kept itself more free from foreign quarrels than the other; but had its share of intestine wars. For Ragojee dying, after a long reign, left four sons, Janojee, Sabajee, Modajee, and Bembajee. The first succeeded his father: but dying childless, in 1772, a civil war commenced between Sabajee and Modajee: the former of whom fell in 1774, and the latter still holds the government of Berar, &c.: and Bembajee administers those of Ruttunpour and Sumbulpour, under him: though, I believe, with less restraint from his superior, than is ordinarily imposed on governors of provinces. Ragojee, the father of the present Rajah of Berar, being a descendant of Sevajee, the original founder of the Mahratta state, the present rajah is therefore by descent, the lawful sovereign of

the whole Mahratta state; the Poonah branch being extinct;* but it appears that he wisely prefers the peaceable possession of his own territories, to risking the loss of them, where the object is no more than the nominal government of an empire, which even manifests symptoms of speedy dissolution.

It is not likely that either of the Mahratta states will soon become formidable to the other powers of Hindoostan. The eastern state has not resources for it; and as for the western, it cannot well happen there, until some one of its chiefs has gained such an ascendancy over the rest, as to re-unite that divided power, to which the late confusions in their government gave birth. It requires some length of time to reduce a feudal government to a simple monarchical one; and till then, the western Mahratta state cannot be formidable; to the British power, at least. If Sindia proceeds with his conquests to the north and west, and establishes a new empire in Malwa, &c. this Mahratta state (the western) must be extinguished; and such a new empire would, perhaps, prove more formidable to Oude, and to the British interests, in consequence, than any power we have beheld since the first establishment of the British influence in India.

* Some believe that a rajah of Sevajee's line is still living; shut up in the fortress of Satara. It is certain that the new pashwahs go thither, to receive the investiture of their office; as they were accustomed to do, in former times: whether such a rajah be in existence, or otherwise, is of no importance to the state, as matters are now constituted.

CONQUESTS OF EUROPEAN POWERS, since the Downfall of the
MUGUL EMPIRE.

AMONG the new powers that arose on the downfall of the Mugul empire, we must not forget to mention the French and English. As for the Portuguese, their power had past its meridian before this period: besides, their views being (apparently) confined altogether to traffic, they wisely made choice of insular situations; such as Goa, Bombay, Salsete, Diu, &c.; and never appear to have possessed any very considerable extent of territory, although they kept on foot a large army of Europeans. The Dutch system was nearly the same: and their prosperity, in a great measure, grew out of the misfortunes of the Portuguese; who having fallen under the dominion of Spain, became obnoxious as well to the jealousy of rivalship, as to the revenge of the Hollanders.

The French power was but of short duration, but remarkably brilliant. It was a bright meteor, that dazzled at first, but which soon burnt itself out, and left their East-India Company in utter darkness. It commenced during the government of M. Dupleix at Pondicherry, in 1749. The French having assisted a soubah of the Deccan in mounting the throne, attended his future steps with an army, and established an influence in his councils that promised to be permanent; but which vanished very early, by the mere breath of court intrigue: for while M. Bussy, at the head of the French army, was at Sanore, in the western quarter of the peninsula (in 1756), a quarrel with the minister of the soubah, effected the dismission of the French. They were then compelled to retreat through an enemy's country for near 300 miles, until they reached

Hydrabad; where they fortified themselves, and waited for a reinforcement from Masulipatam, their nearest settlement; which was upwards of 200 miles from Hydrabad. Great ability was discovered by M. Bussy, on this memorable occasion: an account of which, as well as of M. Bussy's warfare and negociations in general, will be found at large, in Mr. Orme's invaluable History of the Military Transactions of the British Nation, in Hindoostan. At Hydrabad, the quarrel was compromised; and the following year (1757) a part of the next, was spent by M. Bussy in reducing the refractory rajahs, or zemindars, in the northern circars; and in assisting the soubah in the execution of his own plans. But in the midst of these transactions, he was suddenly recalled into the Carnatic, by M. Lally; who determined to collect the whole force of the French, within that quarter: so that the soubah was left at full liberty to accede to the proposals of the English. Lally was also accused of being jealous of the fame of M. Bussy.

The circars, the fruits of M. Bussy's wars and negociations in the Deccan (and which had been obtained in 1753), yet remained to the French: but Colonel Clive, who was at this time Governor of Bengal, with that promptitude and decision which so strongly marked his character, seized on them, with a force from Bengal, in 1759; although they were defended by a much superior force; and the French were deprived of resources to carry on the war in the Carnatic. So that Lally failed to accomplish the purposes for which the French interest in the Deccan had been relinquished; namely, that of expelling the English from the Carnatic: for, on the contrary, the French not only lost all their possessions in that quarter, but in every other part of India. Thus, their political existence may be said to begin, in 1749; and to end in 1761, by the capture of their principal settlement, Pondicherry. They appear to have been the first European power, that trained the natives of India to regular disci-

pline;* as well as the first who set the example of acquiring territorial possessions, of any great extent, in India: in which they have been so successfully followed by the English.

THE expedition of the British troops into Tanjore, in 1749, was the first warfare in which they were engaged, against the forces of an Indian prince: and it proved unsuccessful, as to its main object; which was, the restoration of a deposed king, or rather rajah, of Tanjore, who had applied for assistance to the governor of Fort St. David. The price of this assistance, was to be the fort and territory of Devicottah, situated at the mouth of the Coleroon, or principal branch of the Tanjore river; and this fort, notwithstanding their want of success in the cause of the deposed rajah, the Company's troops, aided by the fleet under Admiral Boscawen, took possession of, after a short siege. In the following year they were called on, by the circumstances of the times, to take part in the disputed succession to the nabobship of Arcot, in opposition to the French: who (as has been before observed) had taken the lead, both in the affairs of the Carnatic, and of the Deccan. We have also observed, that Nizam-al-Muluck, soubah of the Deccan, had placed Anwar o'dien in the nabobship of Arcot (in 1743); and that the death of the same Nizam, in 1748, had occasioned a considerable change in the politics of the Deccan; in which the French engaged so deeply. Chunda Saib was the person whom the French wished to raise to the government of Arcot: and the expulsion of the family of Anwar o'dien, was a necessary step towards it. These contests, which had been carried on with great credit to the British arms, were put an end to, by the interference of the two East-India

* I am far from being well informed concerning the early history of the Portuguese in India: but by a passage in Mr. Orme's Historical Fragments, page 175, it would appear that they had not, in 1683, trained the natives to regular discipline. He says, "The Viceroy of "Goa took the field (against Sambajee, with 1200 Europeans, and 25,000 natives of his own territory.) From the confined limits of the Portuguese territories, we may conclude that these were the ordinary inhabitants only.

Companies, in Europe, in 1754: and Mahomed Ally, son of Anwar o'dien (who had fallen in the course of the war), was left in possession of the Carnatic: or, at least, of that portion of it which had been recovered to him by the British arms. The particulars of these wars will be found in Mr. Orme's History, volume the first.

War breaking out in Europe in 1756, the truce was reduced to a very short period. The first object of the British councils, was to wrest the northern circars out of the hands of the French; in order to deprive them of the means of paying their army. The second was to drive M. Bussy's force out of the Deccan, by means of an alliance with the Nizam, or Soubah. Both of these projects were at this time defeated; the first by the miscarriage of dispatches to India; the second, by the capture of Calcutta, the chief British settlement in Bengal, in June, 1756: which induced the necessity of relinquishing every plan of hostility in the Deccan and Carnatic, in order that a force might be spared, sufficient to accomplish the recovery of so important a settlement as Calcutta; on which the whole trade to Bengal depended.

Aliverdy Cawn, Nabob of Bengal, died in 1756, and was succeeded by his grandson Surajah Dowlah. This young man either was, or pretended to be, irritated at the conduct of the English within his dominions; and was probably jealous of the rising power of Europeans in general, in other parts of India. He determined to expel the English (at least) from Bengal: and accordingly took their fort at Calcutta, and compelled those among them, who were not made prisoners, to retire. In the following year, an armament from Madras, under Admiral Watson and Colonel Clive, not only recovered the settlement of Calcutta, but brought the nabob to terms. The sword, however, being thus drawn, no permanent security could be expected on the side of the intruders, unless supported by power: which could not be obtained, while a nabob, inimical to their interests, possessed the whole power of the kingdom. Suspicions on both sides soon brought matters to a

crisis: and Jaffier Ally Cawn, an omrah in high trust and favour with the nabob, was negotiated with; and, on condition of their assisting him in his views towards the throne, engaged to be their future *ally and confederate*; for, so much were matters changed by the late essay of their strength, and by the genius and good fortune of Clive, that *protection* would ill express the current expectation of the British. The famous battle of Plafsey, fought in June, 1757, and in which Jaffier aided the accomplishment of their wishes, by standing neuter, laid the foundation of the future power of the British nation in Bengal and Hindoostan. From that time they became the arbiters of the succession of the nabobship of Bengal; which speedily led to the posseſſion of the powers of government: for Cossim Ally, who had been placed in the room of Jaffier, disliking his situation, resolved to hazard a change at all events; and this brought on a war, which ended in the expulsion of Cossim, and left the Bengal provinces in the posſeſſion of the English, who restored Jaffier to the nabobship. He had been deposed, on a charge of imbecility, in 1760, and was now restored, in 1763. Cossim retired to Sujah Dowlah, Nabob of Oude, and prevailed on him to espouse his cause. Sujah had distinguished himself in the celebrated battle of Panniput, in 1761; and is reported to have had a considerable share in turning the fortune of the day, at the very moment when victory inclined towards the Mahrattas. Whether he over-rated his own talents for war, or mistook the military character and resources of the British, he, however, engaged too rashly in the war; and the consequences were, a total defeat of his forces, joined with Cossim Aliy's, at Buxar, in 1764: and this was followed by the loss of all his territories, during that and the following year.

Those, whose belief has been staggered by the accounts of the conquests made on the Indians and Persians, by the Grecian, Patan, and Mogul armies, may reconcile their doubts by attending to the events of their own days; in which a handful of French troops

effected revolutions in the Deccan: and another of British, made an entire conquest of Bengal, Bahar, and Oude, in little more than two campaigns. Each of those conquerors, both ancient and modern, after gaining certain advantages, pursued them by means of levies raised in the conquered countries themselves; and thus rendered the vanquished, subservient to the final reduction of their own country. This was even the case of Alexander, who set out with 35,000 men, and left India, with 120,000. Such measures could only be pursued in countries, where the habit of changing their governors, had rendered the governed indifferent to the choice of them. Even the whole number of the combatants on the side of the British, did not exceed 7000, at the battle of Buxar: and of these 1200 might be Europeans. The battle of Plafsey was gained with an army of about 3000 men; of whom 900 only were Europeans.

Lord Clive, who reasumed the government of Bengal, in 1755, found matters in the state I have just represented. He seized the opportunity of taking possession of the Bengal provinces; the Nabob Jaffier Ally having recently died; and obtained from the nominal Mogul, Shah Aulum (who, together with his nominal vizier, Sujah Dowlah, had, as before related, thrown themselves on the generosity of the British); a grant of the duanny, or administration of the revenues of Bengal, Bahar, and Orissa; on condition of paying the Mogul 26 lacks of rupees per annum (260,000l.). Thus a territory producing at that time, at least a million sterling, per annum, after every expence was defrayed, and containing at least ten millions of inhabitants, was gained to the Company, on the side of Bengal: together with the northern circars, valued at near half a million more, and for which a grant was also obtained. Sujah Dowlah had all his territories restored to him, except the provinces of Corah and Allahabad, which were retained for the Mogul; together with the fortres of Allahabad, which was assigned to him, as a proper place of residence.

Although the English were thus firmly and peaceably established in Bengal, in 1765, yet within two years afterwards, they were engaged in a very arduous contest in the peninsula, with Hyder Ally, the sovereign of Mysore, leagued with the Nizam or Soubah of the Deccan. Hyder's history is now so well known to the generality of readers in Europe, by means of the several publications that have lately appeared,* that it will be unnecessary to give any thing more than a short abstract of it, here.

Hyder Ally was a soldier of fortune, and the son of a person who served in quality of *Killadar*, or governor of a small fortrefs, to one of the kings of Mysore. He is said to have acquired the rudiments of war in the French camps: and in the year 1753, distinguished himself, as their auxillary, in the plains of Trichinopoly. About ten years afterwards, being then at the head of the Mysore army, he dethroned his sovereign, and governed under the title of Regent. Soon after, he extended his dominions on every side, the Carnatic excepted: the fine province of Bednore (or Bid-danore) and the Patan nabobships of Cuddapah, Canoul, &c. besides some Mahratta provinces towards the river Kistnah; and the country of the Nairs, and other small states on the Malabar coast, were added to his original possestions; until at last he was at the head of a state, in extent equal to Great Britain, and producing a gross revenue of four millions sterling. The civil broils and revolutions in the western Mahratta state, particularly in latter times, allowed Hyder to aggrandize himself at its expence; but he, nevertheless, received some severe checks from that quarter. He was not arrived at the height of his power, when the war between him and the English broke out, in 1767: but his power was such as to alarm his neighbours, and a resolution was taken to attack him. The Mahrattas under Maderow, entered Hyder's country on the side towards Visiapour; and the Nizam, joined by a de-

* Capt. Robson's, and M. M. L. D. T.'s Lives of Hyder Ally, &c. &c.

tachment of British troops, moved from Hydrabad towards the frontier of Mysore, soon after. Hyder first contrived to buy off the Mahrattas with a large sum of money, and the restitution of some of the places he had taken from them. Next, he negotiated with the Nizam, and had the address, not only to detach him from the English, but to draw him over to his party: so that the English detachment was compelled by necessity to retire to the Carnatic; on the frontiers of which their grand army was now assembling. Besides the whimsical character of the Nizam, several other circumstances might conspire towards the determining him to act in the manner he did. The grant of the northern circars, and the emancipation of the Carnatic from any dependence on the Decean, both of which were obtained from the Mogul, by the English, could not but be very mortifying to the Nizam; as having the appearance of a forcible partition of his territories. The circars, however, came into their hands (as we have seen) by conquest from the French, to whom they were originally granted by a former soubah of the Deccan: so that the grant from the Mogul was merely nominal: besides, the Nizam had been prevailed on to acquiesce in the measure, by an offer on the part of the English, of five lacs of rupees (50,000l.) per annum, by way of tribute or quit rent. As to his superiority in the Carnatic, it had ever been nominal; yet Hyder, who now meditated the conquest of it, was glad to obtain from the Nizam, a grant, or sunnud, for the nabobship of it: and from this time, at least, he considered Mahomed Ally as his rival. It is proper to observe, that in the days of Mahomed Ally's distress, when he possessed only a small part of the Carnatic, he had engaged to cede the fortress of Tritchinopoly, a most important post in the southern division of it, to the king of Mysore, for assistance then afforded him: but this engagement never being performed, Hyder, as might be expected, adopted the claims and resentments of the prince, whose throne he had taken possession of; and never lost sight of his title to Tritchinopoly. Had the

engagement been fulfilled, it would have had the effect of separating for ever, from the nabobship of the Carnatic, the provinces of Tanjore, Madura, and the rest of the southern provinces.

The war that immediately followed, was productive of some sharp battles on the common frontiers of the Carnatic and Mysore: besides which, a strong detachment of the British army seized on Hyder's province of Coimbettore, a fertile district on the south of Mysore, and commanding a ready way to Hyder's capital, Seringapatam. This was the first war in which the British arms had met with any steady opposition from a prince of the country; for in the affair of Tanjore, in 1749, their arms were triumphant in the end, by the taking of Devicottah, their proper object. The war was continued with various success, during the year 1767, 1768, and part of 1769; when Hyder, with a strong detachment of chosen troops, chiefly horse, giving the British army the slip, came within seven miles of Madras, and dictated a peace to the government of that place. This peace was disreputable to the British councils only: since the hands of the Commander in Chief (General Joseph Smith) were tied up, at the very moment, the most favourable for striking a blow; and when Hyder, fearing the general's approach, could purchase his security no other way than by intimidating government into the measure of laying their commands on the general, not to advance; by which measure he might possibly have cut Hyder and his detachment to pieces.

The Nizam, very early in the war, had been detached from Hyder's alliance: chiefly by the strong measure of sending a detachment from Bengal, into the heart of Golconda; which made him tremble for his capital, Hydrabad.

The peace left matters much in the same state as before the war: and whatever credit Hyder might have gained by the conclusion of it, was done away by the total defeat which he suffered, in 1771, from the Mahratta army, within a few miles of his capital; into which he escaped with great difficulty, with a small remnant of

his army; and afterwards defied the attacks of his numerous enemies, who possessed neither the skill, nor the ordinary requisites for a siege. Hyder waited in patience, until the enemy by desolating the country, were compelled to leave it. A few years of peace not only restored matters to their former state, but improved both his revenues and his army, to a degree beyond probability; and at the same time, the distractions that prevailed among the Mahrattas, enabled him to extend his territories at their expence. Such are the effects of firmness, perseverance, and economy.

It may be asked, how the Mahrattas, who are represented as so inferior in point of discipline to Hyder's troops, came to defeat him? It is accounted for by the vast superiority in numbers of the Mahratta army (chiefly horse), which surrounding Hyder's troops, cut off their supplies of provisions, and compelled them to retire towards their capital; through an open country, the most favourable to the attacks of cavalry. Hyder's army was formed into one vast hollow square, and marched, closely surrounded by the Mahrattas; when the advanced front of the square making too hasty a step, separated from the others; and the Mahrattas, pushing through the openings thus made, threw Hyder's whole army into irreparable disorder.

We have spoken before concerning the treaty made with the Nabob of Oude, and the mutual advantages derived to both parties; but particularly to the British, from the mode of defence adopted for Oude, considering it as a common frontier to both states: as also concerning the departure of the Mogul, in 1771; which threw the Corah, &c. provinces, into the hands of Sujah Dowlah.

It may be supposed, that the opposition made to the Mahrattas, when they attempted to take possession of those provinces in 1772, must have created some disgust. Indeed the British government had long considered the Mahrattas, in the general scope of their designs, as inimical to its interests. In 1773, the Mahrattas crossed the Ganges to invade the Rohilla country. A brigade of the

British army marched to the western frontier of that country, and drove the Mahrattas across the river. For this protection, the Rohilla chiefs had stipulated to pay Sujah Dowlah forty lacs of rupees (it must be observed that the British army moved, only as his allies): but when this essential service was performed, the payment of the money was evaded. This breach of treaty led to the invasion and conquest of the Rohilla country, the following year, 1774. A considerable tract of land in the Doobab, was also conquered from the Jats, and other adventurers; by which the boundary of Oude was advanced westward within 25 miles of Agra; north-westward, to the upper part of the navigable course of the Ganges; and south-westward, to the Jummah river. In the following year (1775), on the death of Sujah Dowlah, and the accession of his son Azuph, a new treaty was made with the British government, by which the quantum of the subsidy for the use of the brigade was increased; and the province of Benares, which produced a clear revenue of 240,000l. per annum, was ceded to the Company.

The war with the Poonah, or western Mahrattas, of which we have already spoken (in page lxxxvii), occasioned the march of a brigade across the continent to the side of Bombay and Surat, in 1778-9. This is, perhaps, the most brilliant epoch of the British military history in India. The brigade, which consisted of less than 7000 men, all native troops, commanded by European officers, marched from the banks of the Jummah to the western sea, in despite of the Mahrattas, whose empire they traversed almost the whole way. The French war breaking out at this time, and Hyder Ally expecting a communion of interests with the French, he, in the autumn of 1780, broke into the Carnatic with 100,000 troops; and those, both of foot and horse, the very best of their kind that had ever been disciplined by a native of India. His success in cutting to pieces Col. Baillie's detachment, and the consequent retreat of the Carnatic army, occasioned the British

interests in that quarter to be given up for lost, in the opinion of most people in Europe. Happily, Mr. Hastings and Sir Eyre Coote thought otherwise; and there was sent from Bengal, to the relief of the Carnatic, a brigade of about 7000 men; together with ample supplies of money and provisions. Until the arrival of these troops and supplies, the British possessed nothing more in the Carnatic, than the ground occupied by their camps and fortresses. Under Sir Eyre Coote, Hyder was successfully combated during two campaigns; at the end of which (October, 1782) he found the possession of his object, the Carnatic, at so great a distance, that he appeared to be sincerely desirous of peace. So vast an army as he brought into the field, could not long be supported in it, by the revenues of Mysore alone; and the Carnatic was quite exhausted. Anticipation of revenue in Asiatic governments, has an immediate destructive effect; and cannot often be repeated. Hyder therefore saw the necessity of quitting his ambitious projects; and probably would never have pursued them, had he not expected a more early and effectual co-operation on the side of the French; with whose assistance he hoped to effect our expulsion, in a campaign or two. But he became, perhaps, more jealous of the French than of the English; and had the peace of Paris left the Carnatic in his hands, instead of Mahomed Ally's, the French would eventually have been on a worse footing than they are now likely to be: for he certainly never intended that they should assume any character in it, beyond that of merchants; although their object was the obtaining of a territorial revenue; without which, they well know, no European power can easily effect any thing against another, already in possession of one. In this disposition of mind, Hyder died soon*

* The character of the late Hyder Ally appearing to me to be but little understood in this part of the world, I have ventured to attempt an outline of it. His military success, founded on the improvement of discipline; attention to merit of every kind; conciliation of the different tribes that served under his banners; contempt of state and ceremony, except what naturally arose from the dignity of his character; and his consequent economy in personal expences (the different lusters of which, form the chief distinction of what is called Character

after; and was succeeded by his son Tippoo, who seemed determined to prosecute the war. It was supposed that an attack of Tippoo's provinces, on the west of India, would, by giving an immediate entry into the most valuable part of his dominions, draw him from the Carnatic; and although there could be little doubt of its producing this effect, yet that part of the plan, which regarded the retreat, or security of the troops afterwards, does not appear to have been so well concerted. The deplorable end of this detachment,* which was commanded by General Matthews, is too well known. At last, Tippoo finding that the Mahrattas, his natural enemies, were at peace with the English, and consequently at liberty to pursue their ancient enmities; and moreover that the French had left him; he condescended, though reluctantly, to make peace; and matters were restored nearly to the condition they were in, before the commencement of hostilities. This peace was signed in March, 1784, at Mangalore.

During the whole course of Sir Eyre Coote's warfare with Hyder Ally, it appeared, that nothing decisive could be accomplished, while the latter possessed so large a body of excellent cavalry, together with draught cattle so superior to ours, that his guns were always drawn off, and their retreat covered, although his army was beaten. The inconveniences arising from the want of a sufficient body of cavalry, may, perhaps, be incurable; but with early and proper attention, we might surely have our choice of draught cattle.

(among ordinary princes) together with his minute attention to matters of finance, and the regular payment of his army; all these together, raised Hyder as far above the princes of Hindostan, as the great qualities of the late Prussian monarch raised him above the generality of European princes: and hence I have ever considered Hyder as the FREDERICK of the East. Cruelty was the vice of Hyder; but we are to consider that Hyder's ideas of mercy, were regulated by an Asiatic standard; and it is not improbable that he might rate his own character for moderation and clemency, as far above those of Tamerlane, Nadir Shah, and Abdalls, as he rated his discipline above theirs.

Sir Eyre Coote survived Hyder only about five months. It is a remarkable circumstance that the commanders in chief of two armies, opposed to each other, should both die natural death, within so short a space of time.

* In April, 1783.

We have slightly mentioned a general confederacy of the powers of Hindoostan, against the British. The Nizam or Soubah of the Deccan, having taken disgust at the conduct of the Madras government towards him, in 1779; determined on a very deep revenge. This was no less than to engage all the principal powers of Hindooostan and the Deccan to join in a confederacy to expel the British. The Poonah Mahrattas were already engaged, and Hyder preparing; there remained the Nizam himself, and the Berar Mahratta.* Each party was to pursue a particular scheme of attack, suited to his local position and means. Hyder was of course, to attack the Carnatic: the Nizam, the circars: the Poonah Mahrattas were to keep the Guzerat army, under Goddard, employed; and the Berar Mahratta was to invade and lay waste the Bengal and Bahar provinces. It has been the fate of most of the grand confederacies that we meet with in history, that they have terminated rather in mutual blame, than mutual congratulation. The truth is, that they are seldom, if ever, pursued with the same unity of action, and energy, that are displayed by single states. Some are more deeply interested than others: one fears that another will be too much aggrandized; and a third is compelled to take part, contrary to his wishes. In the present case, the Poonah Mahratta and Hyder were each pursuing their proper, original plans, which had no reference to the particular object of the confederacy: the projector (the Nizam) had probably no intention ever to act at all: and the Berar Mahratta, appeared to act on compulsion: for although the Berar army *did* march, it was contrived that it should never arrive at the projected scene of action. Be it as it will, it was an awful moment for the British interests in India. The speedy pacification of the Nizam, and the money advanced to the Berar army at Cattack (call it by what denomination we may, subsidy, or

* It has been said, that Nadjuff Cawn, who in latter times erected for himself a principality in the souhab of Agra, made a fifth party in this confederacy. Of this circumstance, I am not sufficiently informed.

loan) were means very opportunely used by the Bengal government. Indeed the whole conduct of the war was such as reflected the highest honour on that government: and when we successively were made acquainted with the news of the capitulation of the whole Bombay army in 1779; of the total annihilation of the flower of the Madras army in 1780; the approach of the Berar army towards Bengal in 1781 (which seemed to preclude all possibility of relieving the Carnatic by a brigade from Bengal), together with the grand confederacy: I say, when the news of all these misfortunes and threatening appearances reached Europe, every one had made up his mind to the certain loss of some capital settlement, or to the mutiny of one of the grand armies, for want of pay: and many persons thought that they saw the total destruction of the British influence and power in India. How then were we surprised, to find, that notwithstanding all these miscarriages, we were able, soon after, not only to face, but to seek the enemy in every quarter: and to hear of victories gained by the British armies, when we expected that even the very ground they fought on, had been abandoned to our enemies!

The establishment of the British power in the Mogul empire, has given a totally different aspect to the political face of that country; from what it would have worn, had no such power ever existed. No one can doubt that the Mahrattas, had they been left to pursue their plans of conquest, would have acquired Corah and Allahabad in 1772, as well as the Rohilla country in 1773: and afterwards they might have over-run, at their leisure, the province of Oude, and its dependencies. The British interference prevented this. On the other hand, Hyder might have kept possestion of the Carnatic. Some may be tempted to ask whether Hyder might not be as good a sovereign as Mahomed Ally; or the Mahrattas, as Azuph Dowlah? Whatsoever may be the answers to these questions, they have no reference to the British politics; which require that Hyder or Tippoo, should not possest the Carnatic, in addition to

Mysore: and that the Mahrattas should not possess Oude, or Rohilkund.

I believe there are many who think that the British might have extended their possessions in Hindoostan, *ad libitum*: however, one of the greatest of our Indian statesmen, Lord Clive, thought that the Bengal provinces and the circars, together with a moderate tract of land round Madras,* and the island of Salsette, near Bombay, were fully equal to the measure of good policy, and to our powers of keeping possession. Nor have his successors *acted* otherwise: for our wars since his time, have not been wars of conquest for ourselves; though erroneously represented as such. The late war in India may convince such persons, as require conviction on the subject, that conquests made either on Tippoo, or the Mahrattas, could not be preserved with such an army as the revenues of the conquered tracts would support. We got possession of Bengal and the circars, under circumstances particularly favourable: such as may never occur again.

The Bengal provinces which have been in our actual possession near 23 years (that is, from the year 1765, to the present, 1788), have, during that whole period, enjoyed a greater share of tranquillity than any other part of India; or indeed, than those provinces had ever experienced since the days of Aurungzebe. During the above period of 23 years, no foreign enemy has made any incursion into any part of them, nor has any rebellion happened in any of the provinces (the very inconsiderable one of the zemindar of Jungleterry, in 1774, excepted).† Previous to the establishment of our influence, invasions were frequent, particularly by the Mahrattas: and one province or other was ever in rebellion: owing to a want of energy in the ruling power; an ill paid,

* That is, the Carnatic being already the property of another. No one can doubt but that it would be more for our advantage to have the largest part of the Carnatic in our own hands, than in those of Mahomed Ally; although the whole revenue of it should be laid out in its defence. But the Carnatic is our weak side, in more respects than one.

† The province of Betunes, in which a rebellion happened in 1781, is distinct from the Bengal provinces. It was ceded to the British, as has been observed above, in 1775.

and mutinous army; or an excess of delegated power. Those who know what miseries are brought on a country, by its being the seat of war, will know how to appreciate the value of such a blessing, as that of having the horrors of war removed to a distance from our habitations. There are, doubtless, evils that are inseparable from the condition of a tributary state, where the supreme ruling power resides at the distance of half the circumference of the globe: but these are, I hope, amply balanced by the advantages of military protection: and it is a fact not to be controverted, that the Bengal provinces have a better government, and are in a better state, as to agriculture and manufactures, than any other of the Asiatic countries, China alone excepted. But this state is doubtless very susceptible of improvement, even under a despotic government: though it unfortunately happens, that the grand object for which the Bengal provinces are held, militates against the ease and happiness of their inhabitants: for there can be no inducement to increase a national income for the purpose of finally enriching another nation.

The state into which Hindoostan has fallen, since the downfall of the Mogul empire, is materially different from what it was, before it was united under the Mahomedan conquerors. It was then parcelled out into several moderate kingdoms, which appear to have preserved a degree of balance among themselves: but now, Hindoostan and the Deccan may be said to consist of six principal states, which hold as tributaries, or feudatories, all the inferior ones; of which there are many. The reader will not be at a loss to know that the two Mahratta states, the Nizam, Tippoo, the Seiks, and the British, are those I mean: for whatever verbal distinctions may be made, a compulsive alliance is at least a dependent, if not in fact, a tributary situation.

I have ran over the events of the late war in India, with a brevity which may probably be deemed censurable, considering their importance and variety. But I reflected that the accounts of those

events are in every body's hands; and that every day produces some fresh matter, illustrative of them. The history of events that have happened, and that have also been recorded, in our own times, may be referred to, by the aid of memory; their connexion or dependency traced; and their chronology ascertained; but it was necessary to bring the events of a remoter period more within the view of the reader; the public records of those times being less copious, as the scenes recorded were less interesting to public curiosity.

GEOGRAPHICAL DIVISION *of Hindoostan, into PROVINCES or STATES.*

THE following account is divided into two parts: the first of which, contains the provincial division of the empire under the Moguls, so far as the particulars have come to my knowledge; the other contains the present division of it, into independent states, of very unequal extent and power. It will not be expected that the revenues or military force of those states, should be, in general, well ascertained; or that the exact relation in which many of the inferior provinces stand, to the more powerful ones in their neighbourhood, should be correctly known: since the knowledge requisite for such a detail, can only be collected from persons who have had opportunities either of making the proper inquiries on the spot, or of consulting such documents as have received the sanction of authority. In some instances, it has been found impossible to resort to authorities of this kind: as there are large tracts within this widely extended country, which no European of character (as far as I have heard) has visited, of late years. To this may be added, that the changes are so frequent, that the progress of inquiry and information would scarcely keep pace with them, throughout the whole region.

ACBAR'S DIVISION OF HINDOOSTAN.

I SHALL not attempt to trace the various fluctuations of boundary that took place in this empire, since the era of the Mahomedan conquests, according as the seat of government was removed from Ghizni to Lahore, to Delhi, or to Agra, as suited the politics of the times. It is sufficient for my purpose that I have already impressed on the mind of the reader, an idea that the provinces of Hindoostan proper have seldom continued under one head, during a period of twenty successive years, from the earliest history, down to the reign of Acbar, in the 16th century: and that Malwa, Agimere, Guzerat, Bengal, &c. were in turn independent; and that sometimes the empire of Delhi was confined within the proper limits of the province of that name.

During the long reign of Acbar in the 16th century, the internal regulation of the empire was much attended to. Inquiries were set on foot, by which the revenue, population, produce, religion, arts, and commerce of each individual district, were ascertained; as well as its extent and relative position. Most of these interesting and useful particulars, were, by Abul Fazil, collected into a book called the *AYIN ACBAREE*,* or INSTITUTES of ACBAR; and which, to this day, forms an authentic register of these matters. Acbar began by dividing HINDOOSTAN PROPER into eleven soubahs† or provinces, some of which were in extent equal to large

* It is with pleasure I inform the reader, that an English translation of the whole *AYIN ACBAREE* has been made, and published in Bengal, by Mr. Gladwin; and was begun under the patronage of Mr. Hastings; to whose munificence, and attention to useful literature, the world will be indebted for the means of access to a most valuable repository of intelligence respecting the former state of Hindooostan.

An account of the contents of the *Ayin Acbaree*, will be found at the end of Mr. Fraser's *History of Nadir Shah*.—*Catalogue of Oriental MSS.* page 12.

† It is probable that Acbar might have changed the boundaries of some of the old soubahs, by adding or taking away certain districts, by way of rendering each province more compact, and the provincial capital more central to the several parts of it.

European kingdoms. The soubahs were again divided into *circars*, and these sub-divided into *purgunnabs*. If I was to apply English names to these divisions, I should style them kingdoms (or vice-royalties), counties, and hundreds.* The names of the eleven soubahs were Lahore, Moultan (including Sindy), Agimere, Delhi, Agra, Oude, Allahabad,† Bahar, Bengal, Malwa, and Guzerat.‡ A 12th soubah, that is, Cabul, was formed out of the countries contiguous to the western sources of the Indus, and included Candahar and Ghizni; and three new ones were erected out of the conquests in the Deccan: viz. Berar, Candeish, and Amednagur; in all fifteen.

A slight inspection of the map will afford more information concerning the relative position of these soubahs to each other, and to the adjacent countries, than whole sheets of writing. It may be necessary, however, to make a few remarks on the boundaries of those soubahs that bordered on the Deccan, in order to understand the extent of the new conquests.

Guzerat, then, extended southward to Damaun, where it touched on the district of Baglana, a division of Amednagur.

Malwa extended to the south of the Nerbuddah river; and an angle of it touched on Baglana and Candeish on the south-west and south, and on Berar on the east. The Nerbuddah formed the rest of the southern boundary of Malwa, and also of Allahabad. The government of Bengal extended to Cattack|| and along the river Mahanuddy; but the soubah of Orissa appears not to have been formed at that time.

Of the newly erected soubahs in the Deccan, Candeish§ the smallest of them, occupies the space between Malwa on the north, Berar on the east, and Amednagur on the west and south.

* Few circars are of less extent than the largest English counties.

† Called also Illahabad.

‡ Guzerat is by some of the Hindoos considered as lying without the limits of Hindooostan, Vide Berar Rajah's letters.

|| Called also Cuttack.

§ Named by Acbar, *Dawlatshah*, in honour of Prince Daniil; but at present it bears its old name.

Berar, according to the present definition, has Allahabad and Malwa on the north; Candeish and Amednagur on the west; Tellingana and Golconda on the south; and Orissa on the east. I apprehend that only the western parts of Berar were reduced by Acbar.

Amednagur,* the southmost of Acbar's soubahs, had Candeish and Malwa on the north; the Gatte, or Balagat mountains on the west; Bejapour (or Visiapore) and Tellingana on the south; and Berar on the east. The limits of this soubah (Amednagur) are not defined in the Ayin Acbaree; and as Acbar had wars in the Deccan during almost his whole reign, it may be supposed that its limits were perpetually fluctuating.

Tellingana, which in the Ayin Acbaree is called a circar of Berar, was possessed only in part by Acbar. Tellingana, of which Warangole † was the capital, comprehended the tract lying between the Kistnah and Godavery rivers, and east of Visiapore (answering to the modern province of Golconda); and was probably in more early times, an extensive kingdom; as the Tellinga language is said to be in use, at present, from the river Pennar in the Carnatic, to Orissa, along the coast; and inland to a very considerable distance.

Thus we have a standard for the geographical division of Hindoostan proper, in the time of Acbar; but for the Deccan in general, no authority on record has ever come to my knowledge. It appears that Acbar reduced the western side of it, as far down as the 18th degree of north latitude; and under his successors, the remainder of it, together with the peninsula, as we have already seen, was either entirely subjected, or rendered tributary to the throne of Delhi (the mountainous tracts held by the Mahrattas,

* The capital of this soubah being originally established at the city of Amednagur, it gave name to the whole province, but the name of the fortress of Dowlatabad has in turn superseded it. In like manner the name of Tellingana has now given way to that of Golconda.

† Called Arinkill by Ferishta. The rampart of this place can still be traced, and shews that it must have been a place of vast extent.

excepted), and formed into one government under the name of the DECCAN;* which name, in its most extensive signification, includes the whole peninsula south of Hindoostan proper. However, in its ordinary acceptation, it means only the countries situated between Hindoostan proper, the Carnatic, and Orissa; that is, the provinces of Candeish, Amednagur, Visiapour, Golconda, and the western part of Berar. When the Mogul empire was extended to its utmost limits, by the addition of this vast province, its annual revenue exceeded 32 millions of pounds sterling:† and to enable the reader to make a just estimation of its absolute value, it is necessary to repeat, that the products of the earth are about four times as cheap in Hindoostan, as in England.

* I do not mean to insinuate that the country in question *first* obtained its name of Deccan, under the successors of Acbar: on the contrary, it has been so distinguished from the earliest times. It signifies the South; as Poorva does the East, when applied to Bengal and its dependencies.

† Mr. Fraser, in his Life of Nadir Shah, states the revenues of the provinces under Auruungzebe, as follows:

	LAKES OF RUPEES		LAKES OF RUPEES
Delhi	305 $\frac{1}{2}$	Orissa	36
Agra	286 $\frac{1}{2}$	Cabul, and Cashmere	97 $\frac{1}{2}$
Agimere	163	Malwa	101
Moultan	54	Guzerat	152
Sindy	23	Berar	153 $\frac{1}{2}$
Lahore, or Panjab	206 $\frac{1}{2}$	Candeish	112
Oude	86 $\frac{1}{2}$	Dowlatabad, or Amednagur	259
Allahabad	114	Beder	93 $\frac{1}{2}$
Bengal *	151	Hydrabad, or Golconda	278 $\frac{1}{2}$
Bahar	101 $\frac{1}{2}$	Visiapour	269 $\frac{1}{2}$

TOTAL—30 crores, 18 lacks of Sienna rupees, or about 32 millions of pounds sterling.

* Bengal is rated in the Ayin Acharie (towards the close of the 16th century) at 149 $\frac{1}{2}$ lacks; in Sujah Cawn's nabobship, A. D. 1727, at 142 $\frac{1}{2}$; and in 1778, at 197 lacks, net revenue.

PRESENT DIVISION of HINDOOSTAN.

HAVING given this very general idea of the original division of India, I shall next endeavour to convey an idea of the present division of it, as far as respects the principal states, or the powers that have appeared on the political theatre, since the establishment of the British influence.

The British nation posseſſ, in full sovereignty, the whole soubah of Bengal, and the greatest part of Bahar; I say *the greatest part*, because it appears that there are several purgannahs on the south-west of Little Nagpour, that were formerly classed as belonging to Bahar, but are now in the posſeſſion of the Mahrattas.* In Orifsa, they posſeſſ only the districts of Midnapour, the rest being entirely in the hands of the Mahrattas and their tributaries. These posſeſſions contain about 150,000 square British miles of land; to which, if we add the district of Benares, the whole will be 162,000;† that is, 30,000 more than are contained in Great Britain and Ireland: and near eleven millions of inha-

* This circumstance was ascertained by the late Colonel Camac.

† The following is an account of (nearly) the quantity of land contained in the countries subject to the British government, and to the British allies, in Hindooostan.

BRITISH POSSESSIONS.

Bengal, Bahar, and part of Orifsa	-	149,217	
Benares, &c.	-	12,761	
Northern Circars	-	17,508	
Jaghire in the Carnatic	-	2,436	
Bombay and Salsette	-	200	Square British miles.
			182,122

BRITISH ALLIES.

Oude, Allahabad, and Corah	-	53,770	
Rohilkund, and Fyzoolah Cawn's	-	11,036	
Doo-Ab	-	8,480	
Carnatic in general	-	41,650	53,286
Tanjore	-	4,350	
			46,000
TOTAL	-	281,408	

bitants. The total net revenue, including Benares, is at present about 287 lacks of Sicca rupees, which may be reckoned equal to £,050,000. In this calculation, every branch of the revenue is included; such as the profits arising from salt and opium, the customs, &c.; and the amount of the charges attending the collection of the revenues, and the stipend to the Nabob of Bengal, &c. are deducted: the whole amount of the gross revenue being £,790,000¹. The subsidy from the Nabob of Oude is not taken into this account.*

* The following is nearly the state of the Company's receipts and disbursements at the present time, reduced to sterling money: the Sicca rupee being valued at 2s. 1½d.

BENGAL.

	£.
Land revenue of Bengal and Bahar, 1786	2,800,000
Benares revenue, clear	380,000
Oude subsidy	420,000
Customs, mint, &c. clear of charges	120,000
Salt revenue, ditto	430,000
Opium	60,000
	<u>4,210,000</u>
Deduct charges of collection of the revenues of Bengal and Bahar, nabob's stipend, &c.	740,000
Military charges on the Company's, and on the nabob's account	1,410,000
Civil establishment, marine, and fortifications	390,000
	<u>2,540,000</u>
	Net revenue.
	1,670,000

MADRAS.

Land revenue, the northern Circars included	725,000
Carnatic subsidy	160,000
Tanjore ditto	160,000
Customs, &c.	25,000
	<u>1,070,000</u>
Deduct military charges on the Company's and nabob's account	770,000
Charges of collecting the revenues	85,000
Civil establishment, fortifications, &c.	130,000
	<u>985,000</u>
	85,000

Total net revenue at Bengal and Madras £ 1,755,000

At Bombay the disbursements exceed the receipts, by about £ 300,000
And at Bengoolen (on the island of Sumatra) the annual charges are about £ 50,000

Total of net revenue in India £ 1,405,000

It appears that the aggregate sum of the territorial revenue of the East-India Company,

The natural situation of Bengal is singularly happy with respect to security from the attacks of foreign enemies. On the north and east it has no warlike neighbours; and has, moreover, a formidable barrier of mountains, rivers, or extensive wastes, towards those quarters; should such an enemy start up. On the south is a sea-coast, guarded by shallows and impenetrable woods, and with only one port (and even that of difficult access), in an extent of three hundred miles. It is on the west only, that any enemy is to be apprehended, and even there the natural barrier is strong; and with its population and resources, aided by the usual proportion of British troops,* in addition to the Sepoy establishment, Bengal might bid defiance to all that part of Hindoostan, which might find itself inclined to become its enemy. Even in case of invasions, the country beyond the Ganges would be exempt from the ravages of war, and furnish supplies for the general defence. But, with the whole revenue in our possession, the seat of war will probably be left to our own choice.

The late Nabob of Oude, Sujah Dowlah, possessed, at the time when he first became an ally of the East-India Company, the whole soubah of Oude, and the greatest part of Allahabad; to which, in 1774, were added the eastern parts of Delhi and Agra, till that time possessed by a tribe of Afghan Rohillas, and by the Jats. The zemindary of Benares, which includes also the circars of Gazypour and Chunar, constituted a part of the dominions of

together with the customs, salt, &c. is equal to 4,640,000l. per annum. The subsidies from the Nabobs of Oude, and the Carnatic; and the Rajah of Tanjore, are, of course, not included in this sum. The Company's military establishment in India, in time of peace, is about 10,000 Europeans, and 32,000 regular Sepoy infantry. It appears also, that the sum total of the sales of East-India and China merchandise, imported into this kingdom in one year, has amounted to five millions and a quarter sterling. Considering the magnitude of the sum, in the above statement, one is led to suppose that such an *imperium in imperio*, as the English East-India Company, never before existed: or, at least, never was created, without much greater assistance from the collective strength and resources of the state, in which it was comprised, than this Company has ever received.

* It may appear paradoxical to some persons, but I am really of opinion that it is possible to have too great a proportion of European troops, to Sepoys, in our Indian settlements.

Oude until the year 1775, when its tribute or quit rent of twenty-four lacs (since increased to forty), was transferred to the English. This zemindary, which was lately in the hands of Cheet Sing, occupies the principal part of the space between Bahar and Oude, so that only a small part of the territory of the latter, touches Bahar on the north-west.

The dominions of Oude lie on both sides of the Ganges, occupying (with the exception of Fizoola Cawn's district of Rampour) all the flat country between that river and the northern mountains, as well as the principal part of that fertile tract lying between the Ganges and Jumnah, known by the name of Dooab,* to within forty miles of the city of Delhi. In short, the British nation, with their allies and tributaries, occupy the whole navigable course of the Ganges, from its entry on the plains, to the sea; which, by its winding course, is more than 1350 British miles.

The dimensions of Oude, and its dependencies, may be reckoned 360 British miles in length from east to west, and in breadth from 150 to 180: and their area is about one-third part of that of the Bengal provinces; being to each other in the proportion of 53 to 162. Generally speaking, the whole territory is one continued plain; and is a continuation of that extensive level valley through which the Ganges, and its branches, take their course. It is, moreover, the central part of the ancient kingdom or empire of the PRASII. The capital city is Lucknow, situated on the river Goomty; and about 650 miles from Calcutta.

The present Nabob of Oude, Azuph Dowlah, succeeded his father, Sujah Dowlah, in 1775. He is in alliance with the British power; and a brigade of the Bengal army is constantly stationed on his western frontier: thereby answering the purposes of covering Oude as well as Bengal; and of keeping the western

* Dooab, or Doabah, signifies a tract of land formed by the approximation and junction of two rivers: that formed by the Ganges and Jumnah rivers is called by way of eminence THE DOAB.

states in awe. It is advanced about 100 miles beyond Lucknow. The whole expence of it is paid by the Nabob of Oude, by a stipulated sum, under the name of a subsidy. [See note, page cxiv.]

The gross revenues of the dominions of Oude are reckoned to be about two millions and a half sterling: of which the new acquisitions of Rohilkund, Corah, and other parts of the Doab, are more than one million. The military establishment, including the troops employed in the collection of the revenues, is from 50 to 60 thousand men: but very few indeed of these, deserve the name of regular troops.

Fizoolah Cawn, a Rohilla chief, possesses the district of Rampour, situated at the foot of the northern mountains: and although included in Rohilkund, yet this territory was secured to him by the treaty of Loldong, in 1774. It is valued at 30 lacks of rupees* per annum: but he is in effect tributary to Oude, by being bound to furnish his quota towards an establishment for the common defence.

Contiguous to the western bank of the Ganges, and surrounded by the dominions of Oude, is a small district belonging to a chief of the Patan Rohilla tribe. It is generally denominated from its capital town, Furruckabad: and is little more than 30 miles in extent.

On the south-west side of the Jumnah, and separated from it by a narrow tract of low country, is the territory named Bundela, or Bundelcund, inhabited by a tribe of Rajpoots, but deemed inferior to their brethren of Agimere. Bundelcund is surrounded by the dominions of Oude, Benares, and the Mahrattas: and was formerly subject to a rajah of the name of Hindooput: but is now chiefly divided among his sons, or their descendants. It is a mountainous tract of more than 100 miles square: and contains the

* The reader may with ease reduce any sum in rupees, to sterling, by calculating roundly, at the rate of a lack of rupees to ten thousand pounds.

celebrated diamond mines of Panna,* or Purna, together with some strong fortresses; among which, Callinger is the principal. It is subject to the depredations of the Mahrattas: and has of late years been attempted by Madajee Sindia; who, however, could not make himself master of the principal fortresses; and in consequence abandoned the open country. The ancient limits of Bundelcund were much more extensive than the present; extending much further towards the Nerbuddah river. Chatterpour is reckoned the capital.

The territories of Adjidsing are contiguous to Bundelcund, on the west; to the Mahrattas on the south, and south-west; and to the Benares territory on the east. Their whole extent, including some tributary zemindars on the south-east, may be about equal to Bundelcund: and, like that, subject to the occasional depredations of the Mahrattas. Rewah, or Rooah, is reckoned the capital; and lies on the great road between Benares and Nagpour. We know but little concerning the geography of the remote parts of this tract: nor are the boundaries well defined. The river Soane flows through it, in its course to the Bahar province.

Shah Anum, the nominal emperor, or Great Mogul, of whom we have fully spoken in the historical part of this Introduction, is now a mere pensioner in the hands of Madajee Sindia: who, notwithstanding, appoints him a residence at Delhi.

The Jats, Jates, or Jetes, were a tribe of Hindoos, who long since the death of Aurungzebe, erected a state in the provinces of Agra and Delli. They at last fixed their capital at the city of Agra; and appear to have possessed a tract of country, along both sides of the Jummah river, from the neighbourhood of Gwalior, to that of Delhi; in length about 160 miles, and 50 broad. Col. Dow, in 1770, estimated their revenue (perhaps extravagantly) at 200 lacks of rupees; and their force at 60 or 70,000 men. This

* Ptolemy's *Panajur*, seems to be meant for Panna.

nation is traced by P. Wendell from the countries lying between the S E confines of Moultan and Gohud. It is certain that Tamerlane made war on a people called the *Getes*, in his march from Batnir to Samanah. Nudjuff Cawn, about 14 years ago, dispossessed the Jats of all their country, save the very confined territory of Bhartpour. Madajee Sindia has, in turn, stripped Nudjuff Cawn's successors of these conquests; which are now scarcely worth possessing, although 20 or 21 years ago, under Soorage Mull, they ranked amongst the most flourishing provinces of Hindoostan. It will be perceived that the Jats no longer exist, as a nation: all that remains to Runjet Sing, the son of Soorage Mull, being the fort of Bhartpour, or Burratpour, situated about 45 miles on the west of Agra, with a small territory of 4 or 5 lacks of rupees. The Rajah of Gohud is of the Jat tribe, but unconnected with Runjet Sing.

The late Nudjuff Cawn, whom we have just mentioned, is an instance, among others, of the very sudden rise and fall of the modern states of Hindoostan. From the condition of a minor jaghiredar, and the commander in chief of the imperial army, after the return of the present Mogul, to Delhi, in 1771; he became, in the course of 7 or 8 years, the possessor of a domain, yielding 150 lacks of rupees annually; and kept up an establishment of 80,000 troops of all denominations; in which were included 23 regular battalions of Sepoys. His conquests were on the Jats, the Rajah of Jyenagur, and the Rajah of Macherry (which last had reduced a considerable part of the Mewat); and in 1774, he became possessed of the city of Agra. No vestige of this greatness has remained for several years past. His empire, in a manner, died with him: and Madajee Sindia possesses most of it at this time. This brings us to the subject of MEWAT, which is the hilly and woody tract lying on the S W of Delhi, and on the west of Agra; confining the low country along the western side of the Jumnah river, to a (comparatively) narrow slip, and extending westwards.

about 130 B. miles. In length from north to south, it may be 90 miles. This tract is remarkable, in that, although it is situated in the heart of the empire of Hindoostan; that is, within 25 miles of its former capital, Delhi, its inhabitants have ever been characterized as the most savage and brutal: and their chief employment, robbery and plundering. We have mentioned in page xlix, the severities practised on them in the 19th century. At the present time, Mewat is so famous a nursery for thieves and robbers, that parties of *Mewatti* are taken into pay by the chiefs of upper Hindooostan, for the purpose of distressing the countries which are made the seat of warfare. In Acbar's division, this tract made a part of each of the soubahs of Delhi and Agra: but most of it was included in the latter. Mewat contains some strong fortresses, on steep, or inaccessible hills; among which is Alwar, or Alvar, the citadel of the Macherry Rajah. It has changed masters very often, during the contests between its native rajahs (or kanzadeh), and the Jats, the Rajah of Joinagur, Nudjuff Cawn, and Madajee Sindia; and between these powers successively. Sindia has made a considerable progress in the reduction of it.

Bordering on the north of Mewat, and approaching with its eastern limit within 24 miles of Delhi, is a tract 80 or 90 miles in length, and from 30 to 40 broad, named Little Ballogistan: its ancient Hindoo name was Nardeck. Within the present century, and most probably since the rapid decline of the Mogul empire, this territory was seized on by the Balloges, or Balloches; whose proper country adjoins to the western bank of the Indus, opposite to Moultan. Some tribes of them are also found in Makran. They are represented as a most savage and cruel race; and appear to be very proper neighbours for the *Mewatti*. Their territory is full of ravines, and of course difficult of access to invaders: it has, however, undergone the fate of its neighbours, and been successively tributary to the Rohilla chief, Nidjib Dowlah; to the Jats, and Nudjuff Cawn. Westward, it borders on the Seiks.

The territory possessed originally by Nidjib Dowlah, an Afghan Rohilla (whom we have formerly noticed, as guardian to the young emperor of Abdalla's setting up, in 1761*) is, in part, in the possession of his grandson Golam Cawdir; his son Zabeta Cawn dying in the end of 1784, or beginning of 1785. This territory occupies the head of the Dooab, or that part which borders on the Sewalick mountains. It composed chiefly the circar of Sehaurunpour, in Acbar's division of the empire; and does not exceed 100 B. miles in length, from east to west, by 75 in breadth. The original possestions of Nidjib Dowlah comprehended also the country of Sirhind, on the west of the Jummah river; as well as the districts round the city of Delhi: but the Seiks have not only encroached on the west, and possest that shore of the Jummah, but commit depredations in Sehaurunpour, and even to the banks of the Ganges. Sindia having also encroached on the south, it is highly probable that this tract will not long form a distinct state or principality.

The Seiks may be reckoned the most western nation of Hindoo-stan; for the King of Candahar possestes but an inconsiderable extent of territory, on the east of the Indus. Their progres as a nation has been slightly mentioned in pages Ixiv and Ixvi: and since the complete downfall of the Mogul empire, they have acquired very extensive domains. But their power ought not to be estimated, in the exact proportion to the extent of their possestions, since they do not form one entire state; but a number of small ones, independent of each other, in their internal government, and only connected by a federal union. They have extended their territories on the south-east, that is, into the province of Delhi, very rapidly of late years; and perhaps, the zemindars of that country may have found it convenient to place themselves under the protection of the Seiks, in order to avoid the more oppressive government of their

* Nidjib Dowlah, who was an *élève* of the famous Gazi o'dien Cawn, died in the year 1770.

former masters. Certain it is that the eastern boundary of the Seiks' dominions, has been advanced to the banks of the Jummah river, above Delhi; and to the neighbourhood of that city: for we have just observed, that the adjoining territory of Sehaurumpour, is subject to their depredations, if not actually tributary to them: and that they make excursions to the very side of the Ganges. On the south, they are bounded by the northern extreme of the sandy desert of Registan; and on the S W, their boundary meets that of Sindy, or Tatta, at the city of Behker, or Bhakor, on the Indus. On the west, the Indus is their general boundary, as high up as the city of Attock; near to which begin the territories of the King of Candahar: and their northern boundary is the chain of mountains that lies towards Thibet, and Cashmere. This being the case, they will be found to posseſs the whole soubah or province of Lahore, the principal part of Moultan, and the western part of Delhi: the dimensions of which tract are about 400 B. miles from N W to S E: and from 150 to 200 broad, in general: although in the part between Attock and Behker (that is, along the Indus) the extent cannot be less than 920. Their capital city is Lahore. We know but little concerning the state of their government and politics: but the former is represented as being mild. In their mode of making war they are unquestionably savage and cruel. Their army consists almost entirely of horse, of which they are said to be able to bring at least 100,000 into the field. It is fortunate that the Oude dominions have the Ganges for a barrier between them and this army of plunderers. Abdalla was accustomed to pass through the country of the Seiks, during his visits to Delhi, as late as the years 1760 and 1761: and indeed meditated the conquest of it: but it is probable, that with the present strength of the Seiks, no king of Candahar will again attempt either the one or the other. It was lately reported that the Seiks were in amity with Timur Shah of Candahar, and meant to allow his army a passage through their territories. This, however, appears highly improbable:

the progress of an Indian army, effecting nearly an equal degree of desolation, whether it enters a country on terms of hostility, or of amity.

Timur Shah (the successor of Ahmed Abdalla, late King of Candahar, Korasan, &c. who died about the year 1773) possesses in Hindoostan, nothing more than the country of Cashmere, and some inconsiderable districts, contiguous to the eastern bank of the Indus, above the city of Attock. We have spoken of the extent of the kingdom of Candahar, in Sect. III. of the Memoir: and it may be proper to add, in this place, that the founder of that kingdom, the above-mentioned Ahmed Abdalla, was originally the prince, or chief, of an Afghan tribe, named Abdal (whence the term *Abdalli*): and that he was stripped of his country by Nadir Shah, and compelled to join the Persian army, in 1739. On the death of Nadir, he suddenly appeared among his former subjects, and in a short time erected for himself a considerable kingdom in the eastern part of Persia: adding to it, most of the Indian provinces ceded by the Mogul to Nadir Shah. It has been asserted, that Abdalla had arisen to a high command in the Persian army: and that his department, of course, occasioning a large sum of money to centre with him; he, on the death of Nadir Shah, availed himself of the use of these treasures, to carry off a part of the army. He established his capital at Cabul, near the hither foot of the Indian Caucasus: and it appears by the accounts of Mr. Forster, who traversed the country of Timur Shah, in 1783, that his subjects live under an easy government: that is, for an Asiatic one. The revenues and military force of Candahar, have not come to my knowledge. The military establishment *has* been given at 200,000 men. Ahmed Abdalla had regular infantry, cloathed like the British Sepoys: and, at one time, made use of the British manufactures for that purpose: the trade went by Sindy, and up the Indus, and its branches, to Cabul. This trade has long been at an end.

The province of Sindy, or that lying on both sides of the lower part of the river Indus,* is subject to a Mahomedan prince, who is tributary to the King of Candahar; it being among the provinces ceded to Nadir Shah, by Mahomed Shah, in 1739. Although it properly belongs to Hindoostan, it is so detached from it, by the great sandy desert, that it takes no part in its politics. This province is described in Sect. III, to which the reader is referred.

The province of Cutch, on the S E side of Sindy, as well as the western parts of the peninsula of Guzerat, are governed by rajahs of their own: and do not appear to have undergone much change by the late revolutions in Hindoostan. Cutch is not only a barren country, but in its nature too strong to be easily attacked. And the western part of Guzerat is mountainous and woody; and inhabited by a wild, hardy race: and therefore, on both accounts, unfavourable to the progress of a Mahratta army.

The Mahrattas, as has been observed before, form two distinct empires, or states; that of Poonah, or the western; and Berar, the eastern. These states, collectively, occupy all the southern part of Hindoostan proper; together with a large proportion of the Deccan. Malwa, Orissa, Candeish, and Visiapour; the principal parts of Berar, Guzerat, and Agimere; and a small part of Dowlatabad, Agra, and Allahabad, are comprised within their extensive empire; which extends from sea to sea, across the widest part of the peninsula; and from the confines of Agra northward, to the Kistnah southward; forming a tract of about 1000 British miles long, by 700 wide.

The western state is divided among a number of chiefs, or princes, whose obedience to the paishwali, or head, is, like that of

* The celebrated Sir William Jones very ingeniously remarks, that "it is usual with the Asiatics to give the same name to the countries which lie on both sides of any considerable river." Thus the province of Sindy is divided by the Indus; Bengal by the Ganges; and Pegu by the Irraberry. Egypt, in like manner, is divided by the Nile. Probably, the facility of access to either side, by means of a navigable river, and an occasional inundation, subjected each of the divisions, formed by the course of the river, to the constant depredations of its opposite neighbour; till necessity produced a compromise, which ended in joining them in one community.

the German princes to the emperor, merely nominal at any time; and, in some cases, an opposition of interests begets wars, not only between the members of the empire themselves, but also between the members and the head. In fact, they are seldom confederated but on occasions that would unite the most discordant states; that is, *for their mutual defence*: for few occasions of foreign conquests, or plunder, are of magnitude enough to induce them to unite their armies.

Was I inclined, I want ability, to particularize the possessions and situations of all the chiefs that compose this Mahratta state. I shall therefore attempt only to mention the principal ones, commonly styled *jaghiredars*, or holders of *jagbires*:* their titles to their possessions, being nominally during their life time only; although they have long since become hereditary.

The paishwah, or nominal head of the western empire, resides at Poonah, which is situated at the south-west extreme of the empire, and about 100 miles from Bombay. There are three principal jaghireddars on the north of Poonah; and two on the south: the first are, Madajee Sindia, Tuckajee Holkar, and Putty Sing Gwicuar; and the latter, Purseram Bow, and Rastah, who is more commonly styled the Meritch *Wallaib* (or Meritch man) from his having established his capital at that city,† previous to the conquest of it, by Hyder Ally. Before I proceed to particularize the different partners, or sharers, in the several provinces, it will

* Jaghira, means a grant of land from a sovereign to a subject, revokable at pleasure; but generally, or almost always, for a life rent.

† The exact geographical position of this important fortress and city, is not ascertained; but it is with great reason supposed to be the same with Mirje, or Merdji, of Mandesloe's route, drawn by P. du Val: which is situated near the north bank of the Kistna river, about 70 road miles SW from Visiapour; and 130 from Poonah. It is also, most unquestionably, the same place with Merrick; a place of consequence in Aurungzebe's wars with Sambajee. In the Select Committee's reports, it is named indifferently, Merrick and Meritz. It may be collected from those reports, and from Mr. Orme's Historical Fragments, that this place is situated on the north bank of the Kistna; on the NW of Sanore-Bancapour, and on the SW of Visiapour; and its distance from the former ought to be very considerable, for part of the circuit of Nourgal, Azimabad, and Raibaug, intervene, between those of Bancapour and Meritz. And this is the case with Mirje on the map, which is about 108 G. miles from Bancapour. There is also a fortress of great note in Aurungzebe's, and Hyder Ally's wars, named Darwar.

• • Since the first edition was printed, the communications made by Capt. Reynolds, of the Bombay establishment, have enabled me to correct this, as well as other parts of the map.

be necessary to observe that the Mahratta dominions have in some places, been portioned out among the different chiefs, after a method that appears the most confused and intricate imaginable. For not only the *purgunnabs*, or grand divisions of provinces, are divided, in some instances, among three different powers; but even the revenues of particular villages, are divided in like manner; and in consequence, distinct officers are appointed for the purpose of collecting the respective shares.*

The province or soubah of Malwa (to which this account particularly applies), one of the most extensive, and the most elevated and highly diversified in Hindoostan, is divided among the paishwah, Sindia, and Holkar: as is also the small soubah of Candeish, adjoining to it, on the south; and which contains the fine city of Burhanpour, in the possestion of Sindia.

The province of Agimere, has only in part been possest by the Mahrattas, and that part is now entirely in Sindia's hands. What is here exprefed, relates only to what may be termed Agimere *proper*; and not to the whole soubah of that name, according to its geographical definition in the Ayin Acbaree; since the three great Rajpoot principalities, Oudipour, Joodpour, and Joinagur, as well as Rantampour, are there included in it. These Rajpoot principalities (of which more will be said hereafter) have long been held tributary to the Mahrattas; and now by the ascendancy of Sindia, and by virtue of his local situation, he converts the whole of the tribute to his own use.

The largest, as well as the finest part of Guzerat, is divided between the paishwah, and Futtu Sing Gwicuar (or Gwicker); the latter holds his share chiefly in the northern part of it.

The provinces on the south of Poonah, are divided between the paishwah, and the *jaghiredars*, Purseram Bow, and Rastah. So little is known in Europe concerning the geography of this part

* It is probable that this irregular division arose from some accidental circumstances at the time when the conquest was made; and which cannot now be traced: but as it has the appearance of an expedient, calculated to check and restrain the power of the different jaghireddars, it is generally supposed to be the effect of policy and design. A.

of the country, that the map of it is almost a blank. I am by no means certain where to place the common boundary of the Mahratta and Tippoo's countries, in this quarter.

The paishwah, or his representatives, possess also many other districts in the NE, and east, parts of Malwa, &c. for the Poonah territories, or those of his jaghiredars, close on the river Jumnah, opposite to Calpy: and also extend along the northern bank of the Nerbudda river, almost to its source; encroaching also very deeply on the SW side of Bundelcund; according to its ancient limits. The districts of Sagur, and Mundella, are situated in this quarter. Thus it appears, that the territories subject to Poonah, are separated, or rather insulated, in an extraordinary manner; and this circumstance alone, must influence the domestic as well as the foreign politics of this state: since any considerable jaghiredar may easily withhold the government's share of the revenues, and convert it to his own use.

From what has been said, it will appear impossible to discriminate the possessions of the paishwah, any more than those of his jaghiredars, on the map. All that can be done, is to mark the body of each tract of land, in which the paishwah and the particular jaghiredars participate. It is understood that the paishwah possesses a larger share in the western part of the Deccan, than elsewhere. This tract is naturally very strong, particularly on the west side towards the sea, where a stupendous wall of mountains, called the Gaus, rises abruptly from the low country, called the Concan (or Cockun), supporting, in the nature of a terrace, a vast extent of fertile and populous plains, which are so much elevated, as to render the air cool and pleasant (see Index, article *Gaus*). This elevated tract is continued not only through the Mahratta territories, but extends through the peninsula, to the southern extreme of Mysore; and is named *Balla-Gaut*, throughout its whole extent; meaning literally, the *bigger*, or *upper Gaus*: or perhaps more correctly the countries lying

ABOVE OR BELOW the Gaus.* In the peninsula, it is applied in contradistinction to *Payen-Gaut*, or the *lower Gaus*: but in the Deccan, it appears to be used only as a proper name, and not as a correlative; we having never heard of the Deccan, *Payen-Gaut*.

Nor is it less difficult to ascertain the sum of the revenue of this state, than to particularize the extent of the districts, from whence it is collected. The most intelligent and best informed persons that I have consulted on the occasion, will not venture to give an opinion on it. One person (a native of India) has stated the revenue at 12 crores of rupees, or 12 millions sterling: and the net receipts, jaghires deducted, at five crores. The same account makes the military establishment in the field, to be 200,000 troops, foot and horse; besides an equal number in garrison. Another account of the revenue, by an European gentleman, reckons 7 crores for the net revenue. If the provinces possessed by this state, were to be rated in the same proportion as in the time of Aurungzebe, the net revenue would be about 8 crores of rupees, or 8 millions sterling.

Sindia is unquestionably the most powerful jaghiredar within this state; and ought to be regarded as a sovereign prince. Since the Mahratta peace (1789), he has extended his frontier from Malwa towards the Jumnah; swallowing up most of the petty states that heretofore existed there: and in particular, that of Gohud, including the celebrated fortress of Gwalior (see page 234 of the Memoir). He has also carried his arms northward to Delhi, and into the provinces of Mewat and Jyenagur; reducing many fortresses, and a considerable tract of country, which were heretofore successively possessed by the Jats, and Nudjuff Cawn. In fine, he possesses the person of the nominal Great Mogul, and all that can

* *Gaut*, or *Ghaut*, signifies either a pass through mountains, or a landing-place on the bank of a river. In the former sense, the term has been applied to the Peninsula which is divided by ridges of mountains, abounding with passes and defiles.

be accomplished by virtue of his name. It would appear that Sindia's plans embrace too great a variety of objects at one and the same time: for, not long ago, his troops were compelled to retire from Bundelcund, in which they possessed most of the open country, the fruits of a very recent conquest. He seems bent on extending his conquests on the north and west: but time alone can discover whether he will succeed in establishing a permanent empire, on that side. The revenue of his paternal, or original dominions, in Malwa, &c. has been estimated at one crore of rupees per annum. It is difficult to ascertain what the value of his new acquisitions are, in their present state: for those portions of Agra, Delhi, &c. which he holds, having been so long subject to the depredations of contending armies, little benefit can be derived from them, at present.* Gohud, one of these acquisitions, is estimated at 20 or 30 lacks per annum. Holkar is supposed to possess 80 lacks per annum, in his share of Malwa. Sindia's capital city is Ougein, near the ancient city of Mundu, the capital of the Chilli-gi kings of Malwa: and Holkar's capital is Indore, situated about 20 cosses south or S E of Ougein.

The Berar or Nagpour rajah, Moodajee Boonslah (or Bonsola) possesses the principal part of Berar, together with the province of Orissa.† The remainder of Berar is held by the Nizam, or Soubah of the Deccan, who pays a *about*, or fourth part of its clear revenues to Moodajee. On the west and south, the Berar dominions border on, or are intermixed with, those of the Nizam: on the N W and north, are the provinces of Bopal, Gurry-Mundella, &c. tributaries of Poonah; together with the territories of Adjid Sing. On the east, the Nagpour territories thrust themselves between the

* These territories have formerly yielded 3 or 4 crores per annum: but they are now in a state of desolation, which it is impossible to form any idea of, without having actually beheld them. A. [This note is by a gentleman, who has been on the spot.] See also page lxxviii.

† Orissa, is nominally one of the British provinces, but we have observed in another place, that only a very small part of it is subject to the Bengal government.

British possessions in Bengal, and those in the northern circars, so as to occupy near 180 miles of the country adjacent to the sea ; and of course, to break the continuity of their possessions on the sea coast. Moodajee's dominions are very extensive, being in length from east to west 550 British miles, and in some places 200 from north to south. He does not possess all this in full sovereignty ; for Ruttunpour and Sumbulpour are little more than tributary, and are governed by his brother Bembajee. We know less of the interior parts of Berar, than of most other countries in Hindoostan ; but, by what we do know, it does not appear to be either populous or rich. Nagpour is the present capital, and the residence of Moodajee ; and it is situated about midway between Bengal and Bombay.

Cattack, or Cuttack, the capital of Orissa, is a post of consequence on the river Mahanuddy, as it lies in the only road between Bengal and the northern circars ; and the possession of this city and its dependencies, gives the Berar rajah more consequence in the eyes of the Bengal government, than even his extensive domain, and centrical position in Hindooostan.

Moodajee has been recognized (page lxxxviii) as a descendant of the original founder of the Mahratta empire, Sevajee. The sum of his revenue is variously stated. Some have reckoned his part of Berar, at 8*1/4* lacks of rupees, per annum ; and Cattack at 2*1/4* ; while others have allowed only 60, for his whole revenue. If we take it at the highest calculation, 108 lacks, he ought not to be considered in a formidable light, by the British power. But placing the actual sum of his income out of the question, his dominions are too widely extended, in proportion to their value, to form a powerful state. Cattack is no less than 480 miles from the capital, Nagpour. It has been well observed, that the ordinary cause of jealousy between neighbouring states, is done away, in the case of Bengal and Berar, by the nature of that part of the Berar dominions, which borders on Bengal ; it being generally woody and uninhabited ; so that the

virtual boundaries of the two countries are removed to a distance from each other.

These are the principal of the countries reduced into the form of governments, by the Mahratta chiefs: but so habituated are they to rapine and plunder, that few of the neighbouring states, but have, at one period or other, felt and acknowledged their power. Bengal and Bahar, were, for a short time, subjected to a regular tribute; and the Carnatic, Mysore, the Nizam's provinces, the Doob, Bundelcund, and the southern parts of Delhi, have been frequently over-run. Their predatory excursions sometimes carried them 1200 miles from their capital. But the loss of the battle of Panniput, in 1761, induced a degree of caution in their military enterprizes; and from that period, their power appears to have been on the decline. Shut out of Bengal, Oude, and the Carnatic, by the British arms, and out of Mysore by Hyder's, their field of action has been much circumscribed; and the late war with the British power, discovered their weakness to all Hindoostan.

I am not sufficiently informed on the subject, to be able to particularize all the different provinces, or districts, that are tributary to the Mahratta states. Some have been already mentioned: and among others, the Rajpoot principalities of the soubah of Agimere; and which, from their former importance and weight in the internal politics of the Mogul empire, deserve particular notice.

In the early part of the present century, these states, collectively, appeared so formidable to the successor of Aurungzebe, that he was constrained to leave them in quiet possession of their independency, during the sedition of the Seiks, in Lahore (see page lxiv.). Vast have been the changes since that time: for what the disciplined armies of Aurungzebe and his sons could not accomplish, has been effected by the Mahratta freebooters: so much easier is it to ruin a country, than to make a conquest of it. The history of the decline of the Rajpoot principalities, is foreign to the present work: it is sufficient to observe, that they are reduced to their present low state,

merely by the depredations of Mahratta detachments; which being composed of light horse, and accustomed to divide into innumerable small parties; they by their rapid and desultory movements, at once spread desolation, and elude the attacks of the inhabitants. This must be understood to relate only to the open parts of Rajpootana: the mountainous parts being yet free from their incursions.

RAJPOOTANA was divided into three great principalities, under the names of Oudipour, Joodpour, and Ambeer (or Amere), now better known by that of Joinagur, or Jyenagur. Oudipour was also named Meywar, or Midwar; and Joodpour, Marwar. In Acbar's division of the empire, these principalities were classed as belonging to the soubah of Agimere, which is sometimes called Marwar. It is not an easy task, by means of the geographical matter extant, to assign the precise limits and dimensions of these principalities; which occupy the space between the western confines of Agra, and the N E part of Guzerat; and between the sandy desert (or Registan) and Malwa: that is, an extent of 330 British miles from N E to S W; and 200 broad, in the widest part. Their relative situations, and comparative dimensions, may be seen in the map; where Jyenagur or Jyepour, will be found to lie to the north-east; Oudipour to the S W; and Joodpour to the N W, bordering, angularly, on the other two. Pere Wendell's MS. account of these states, from whence I have extracted many of the above particulars, states the revenues of Oudipour at 10 lacks of rupees, Marwar at 40, and Jyenagur at 40, per annum, in the year 1779.* The two former are very mountainous, with a sandy soil in the valleys: the latter is the most fertile, and was, about the middle of this century, in a high state of improvement, under the government of the celebrated Rajah Jyesing, or Jefsing; who founded the new capital of Jyepour, which has had the effect (not unusual in Hindooostan)

* The whole revenue of the soubah of Agimere, in the time of Acbar, appears to have been only about 75 lacks. Aurungzebe is said to have doubled the land-tax on the Rajpoots; and Agimere is accordingly stated in Mr. Fraser's account, at 163 lacks of rupees.

of changing the name of the province to that of the capital. P. Wendell represents Jyepour as a place of great wealth and commerce in 1779, being the *entrepot* of the principal part of the goods that are brought from every quarter of India. The rajah built an observatory in his capital, and invited Pere Boudier to it, in 1734. It is feared, that the confusions that have so long prevailed in this province, must have greatly reduced the wealth and importance of the capital. We have mentioned before, that Sindia receives the tribute of all the three Rajpoot provinces, and converts it to his own use: and that he had made some considerable conquests in them, particularly in Jyenagur.

It is probable that in early times, the whole Rajpootana constituted one entire kingdom, or empire, under the Rana or Prince of Oudipour, who has in all times, since we had any knowledge of his history, been considered as the head of the Rajpoot states. A long established custom of homage to a temporal prince, from those who do not acknowledge his superiority in any other way, seems to prove the existence of real power in the hands of his ancestors. In modern times the Rana of Oudipour seems to have been considered somewhat in the same light as the general of the Amphycutions was in Greece. Cheitore was the ancient capital of the rana, a place much celebrated for its strength, riches, and antiquity, when it was taken and despoiled by Acbar, in 1567: Oudipour is the present capital.

The Rajpoots are not confined entirely to the tract abovementioned, or even to the soubah of Agimere: since some inferior tribes of them are settled in Bundelcund, and in Gurry-Mundella. Others, according to Thevenot, are settled in Moultan; and indeed, he represents Moultan as the original country of the Kuttries, from whom the Rajpoots sprung (see Index, article *Kuttries*).

Of the countries of Nagore, Bickaneer, Jafselmere, and those bordering on the lower part of the course of the river Puddar, and on the sandy desert, we know little at present, except that they

form a number of petty rajahships; and are understood to be mostly inhabited by Rajpoots.

The Rajpoots are ordinarily divided into two tribes or classes; those of RATHORE, and CHOCHAN, or SEESODYA. Marwar, or the N W division of Agimere, is the proper country of the former; and Meywar, or Oudipour, of the latter. The reader will be pleased to observe, that Cheitore is also synonymous with Oudipour, or Meywar. The Rathore tribe were originally the most numerous of the two. It has often been asserted, and by the late Col. Dow, among others, that the Mahratta chiefs had their origin from the Rathore tribe: and to countenance this opinion, the etymology of the name Mahratta, has been drawn from RATHORE; prefixing to it, MAHA, or Great. We have seen, however, in page lxxix, that the fact is very different, and it rests on the foundation of historic records: the term Mahratta being derived from Marhat, or Marheyt, the name of the province in which Sevajee first established his independency: and this etymology appears to be perfectly natural. And by the same rule, Sevajee must have been of the Seesodya tribe, as drawing his lineage from Oudipour; and not of the Rathore tribe, as erroneously represented.

Of the five northern circars, Cicacole, Rajamundry, Ellore, and Condapilly,* are in the posession of the English; and Guntoor is in the hands of the Nizam. The four first occupy the sea coast from the Chilka lake on the confines of Cattack, to the northern bank of the Kistnah river; forming, comparatively, a long, narrow slip of country, 350 miles long, and from 20 to 75 wide. The nature of the country is such, as to be easily defensible against an Indian enemy, it having a barrier of mountains and extensive forests on one side, and the sea on the other; the extremities only being open. Its greatest defect is in point of relative situation to

* These circars, or provinces, were originally denominated from their position in respect to Madras, on which they depend; and the term *northern circars*, has at length been adopted by the English in general.

Bengal and Madras: it being 350 British miles from the first, and 250 from the latter; so that the troops destined to protect it, cannot be reckoned on, for any pressing service that may arise at either presidency. The circars, in point of strictness, appertain partly to Golconda (or the Deccan), and partly to Orissa; and are held of the Nizam, on condition of paying him a stipulated quit rent. When the French took possession of the five circars, in 1753, they were valued at about 43 lacks of rupees per annum. The English never possessed Guntoor, which was estimated at near 7 lacks of the above sum: so that 36 lacks (360,000l.) should be taken for the true value of the English possessions in the circars. In 1784, they were reckoned to produce about that sum. It would appear that the Nizam, by retaining Guntoor, has more than an equivalent for the *peshcush*, or tribute, which is 5 lacks per annum.*

The possessions of the Nizam, or Soubah of the Deccan (a younger son of the famous Nizam-al-Muluck), comprise the province of Golconda, that is, the ancient province of Tellingana, or Tilling, situated between the lower parts of the courses of the Kistnah and Godavery rivers; and the principal part of Dowlatabad; together with the western part of Berar, subject (as has been said before) to a tribute of a chout, or fourth part of its net revenue, to the Berar Mahratta. The Nizam has the paishwah, or Poonah Mahratta on the west and north-west: the Berar Mahratta on the north; the northern circars on the east; and the Carnatic, and Hyder Ally on the south. I am not perfectly clear in my idea of his western boundary, which, during his wars with the Mahrattas, was subject to continual fluctuation: but I understand generally that it extends more than 40 miles beyond the city of Aurungabad, westwards; and comes within 80 miles of the city of Poonah: and that on the SW it goes considerably beyond the river Beemah, and to the borders of Sanore-Bancapour. His capital is Hydrabad, or Bagnagur, situated on the Moufsl river, near the famous fortress of Golconda.

* Guntoor has since been ceded to the East-India Company.

The districts of Adoni and Rachore, which were in the hands of Bazalet Jung (brother to the Nizam) during his lifetime, are now in the hands of the Nizam. The Sourapour, or Sollapour rajah, on the west of the Beennah river, together with some other rajahs, are his tributaries.

Probably the Nizam's dominions, including his tributaries and feudatories, are no less than 450 miles in length, from NW to SE; by 300 wide. Till he took possession of the Guntoor circar in 1780, his dominions no where touched on the sea coast.

The Guntoor circar (called also Mortizanagur and Condavir) occupies the space between Condapilly, the southmost of our four circars, and the northern part of the Carnatic: extending along the sea coast of the bay of Bengal, more than 30 miles. The possession of this district to the English, would have been extremely eligible, as well for the purpose of shutting out the French nation from the Deccan, as to keep open a communication with the northern circars, and to preserve the continuity of our possessions, and those of our allies. Although the maritime parts of this circar are flat and open, yet the interior part of it contains some very strong fortresses, and posts. The Nizam took possession of it on the death of his brother Bazalet Jung, and still holds it (see the last page).

It has not been in my power to obtain, even a tolerably exact account of the sum of the Nizam's revenue; or of his military establishment: the latter, however, is far from being respectable, on the score of discipline. The former has been ever varying, and generally diminishing: by reason of the encroachments of the Poonah Mahrattas, and the Mysoreans: it is said to be reduced so low as 190 lacks of rupees, annually. But besides this sum of actual revenue, it must be taken into the account, that he has depending on him, many jaghirendars, who hold their lands on the tenure of military service.

The dominions of Mahomed Ally, Nabob of the Carnatic,

and an ally of the East-India Company, commence on the south of the Guntoor circar, and extend along the whole coast of Coromandel to Cape Comorin. It must be understood that I mean here to include Tanjore, Marawar, Trichinopoly, Madura, and Tinevelly; all being appendages of the Carnatic. Under this description, the Carnatic is not less than 570 British miles in length from north to south, but nowhere more than 120 wide, and commonly no more than 75. Such a long, narrow, tract of country, bordered by an active and powerful enemy, whose territories are, moreover, of a compact form, and his force more readily collected, must always be subject to have its distant provinces cut off from its assistance; or if it divides its force, for their separate defence, the safety of the whole will be endangered.

The Carnatic anciently comprised all that part of the peninsula that lies south of the Gondegama and Toombuddra (or Tungebada) rivers, from the coast of Coromandel eastward, to the Gaut mountains westward, and was divided into *Balla-Gaut* and *Payen-Gaut*, or the upper and lower Gaus;* the former being the western part, and containing the districts which now compose the country of Tippoo; and the latter, the eastern part, or the Carnatic according to its present definition.

The revenue of the nabob is stated at about a million and a half sterling, per annum; out of which he pays a subsidy of 160,000l. per annum, to the East-India Company, towards the expence of their military establishment. The evils attendant on the improvident conduct of the nabob, were severely felt during the late war, and ought to be cautiously guarded against in future.

The British possessions in the Carnatic are confined, chiefly, to the tract called the Jaghire, which extends along the coast, about 108 B. miles, and 47 inland, in the widest part. Its revenue is reckoned 150,000l. Besides the Jaghire, there are lands depen-

* See the term *Gaut*, explained in page cxxviii.

dent on Cuddalore; but the amount is not considerable. The whole amount of the land revenue dependent on Madras, including the circars, has been stated, in page cxiv, at 725,000l. per annum.

The dominions of Tippoo Sultan, who styles himself Regent of Mysore, begin on the west of the ridge of mountains beyond Dalmacherry, Sautgud, and Attore; and extend southward to Travancore and Madura; northward to Soonda and Visiapour (enveloping Adoni, the territory of the late Bazalet Jung) north-eastward to Guntoor and Ongole; and westward to the sea. They comprehend, generally, the provinces of Mysore, Bednore, Coimbettore, Canara and Dindigul; besides his late father's conquests to the northward, which are Merritch, Soonda, Chitteldroog, Harponelly, Sanore-Bancapour, Roydroog, Gooty, Condanore, Canoul, and Cuddapah.

Tippoo's present territory exceeds very considerably, both in extent and revenue, that of his rival, the Nabob of Arcot: but probably it will, for some time at least, require a prince of considerable talents, to prevent a state, composed of such discordant parts, from falling to pieces. A descendant of the Hindoo King of Mysore, whom Hyder dethroned, is living; and kept a state prisoner at Seringapatam, Tippoo's capital. He is occasionally shewn to the populace: and the circumstance of his being permitted to live, is a strong proof how much the popular prejudices prevail in favour of the family of their ancient kings. It was part of the plan of operations of the southern army, under Colonel Fullarton, in 1783, to march from Coimbettore to Seringapatam, in order to liberate this prince, and encourage the people of Mysore to throw off their allegiance from Tippoo: and it was the opinion of many sober persons that it might have succeeded, if circumstances had permitted Col. Fullarton to undertake it. The general character of Tippoo, is that of a man of high ambition: with great abilities for war and

finance; cruel, to an extreme degree; and obstinately attached to his schemes. He is unquestionably the most powerful of all the native princes of Hindoostan; but the utter detestation in which he is held by his own subjects, renders it improbable that his reign will be long. His dominions are very extensive; and although the imperfect state of the geography of the western part of the peninsula, does not permit me to mark their northern boundary, yet it is pretty certain that it touches the river Kistnah, on the south of the city of Visiapore; and therefore, the extent of Tippoo's territory, or kingdom, from the valley of Ootampaliam on the south, to the Kistnah on the north (or rather N N W), cannot be less than 550 British miles. In breadth it is very unequal: in the widest place, that is, in the northern part of the peninsula, the breadth is at least 330 miles: but less than 150 in the parallel of Trichinopoly; and further southward, it ends in a point. In page xcvi, its area has been compared to that of Great Britain; which is taken at 96,400 square British miles: and the country of Tippoo is supposed to contain 21 square degrees; which, in the parallel of 14° , produce about 97,650 B. miles. By the peace of 1782, Hyder was to relinquish all, but his *ancient possessions*: how far his successor has fulfilled the terms of the treaty, I am not informed: but the term, *ancient possessions*, was too general, or rather too vague, to be understood in any particular sense.

The gross revenue of Tippoo, has been stated at four crores of rupees, or as many millions sterling. His military establishment is very great; being no less than 72,800 regulars, including 740 Europeans, under the command of French officers: besides troops in the frontier garrisons, to the amount of 49,000. The remainder of his force, consists of irregulars of various descriptions, and amounts to 33,000, and upwards; so that the whole force of Tippoo, is reckoned 155,000: of which, near 73,000 are of a class much superior to any troops that have ever been raised and dis-

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ciplined by a native of India.* His desire of extending his kingdom, will keep him at perpetual variance with the Poonah Mahrattas, or the Nizam, or both; as it is only on their side, that any acquisitions can be made, without quarrelling with the English. Hyder long meditated the conquest of the Travancore territory, situated at the extreme of the peninsula; but was prevented by the English. Tippoo is said to have intentions of the same kind. The reader may easily collect, from a cursory view of the map, how hurtful to the interest of the Carnatic, such a revolution would prove: since it implies also the transfer of the Cochin territories, and all the tract lying on the west of the Gauts.

* I have been favoured with the following particulars, relating to Tippoo Sultan's military establishment; and which may be depended on.

REGULARS.

Cavalry		27,400
Sepoy Infantry, Hindoos and Mahomedans		30,000
Topasses (or Hatmen), that is, the descendants of Portuguese and other Europeans, Infantry		7,300
Europeans, Cavalry	200	
Foot	540	

Artillery Corps, consisting of Europeans, Topasses, &c.		740
		1,390
		72,830

Guns attached to the battalions	110	
Garrisons on the frontiers, Horse		21,000
Foot		28,000
		49,000

Irregulars, armed in various ways	7,000	
Auxiliaries from the Rajahs of Rydroog, Darwar, Harponelly, Sanore, &c.		
Horse	13,300	
Peons (Irregulars)	13,000	
	26,300	

RECAPITULATION.

Regulars	-	-	72,830
Garrisons	-	-	49,000
Irregulars	-	-	7,000
Auxiliaries	-	-	26,300
Total			155,130

2001

CHRONOLOGICAL TABLE of EMPERORS, who have reigned in
HINDOOSTAN, since the GHIZNIAN CONQUEST.

GHIZNIAN Emperors.

	Began his Reign A. D.		Began his Reign A. D.			
* Mahmood I.	-	1000	Mahomed IV.	-	-	1389
Mahomed I.	-		Abu-Bicker	-	-	
Musaood I.	-	1028	+Mahmood III.	-	-	1393
Modood	-	1041				
Musaood II.	-	1051	Dynasty of the SEIDS.			
Ali	-		Chizer	-	-	1414
Reschid	-		Mubarick II.	-	-	1421
Feroch-Zaad	-	1052	Mahomed V.	-	-	1433
Ibrahim I.	-	1056	Alla II.	-	-	1447
Musaood III.	-	1098				
Arsilla	-	1115	Dynasty of LOST.			
Byram I.	-	1118	Beloli	-	-	1450
Chusero I.	-	1152	Secunder L	-	-	1488
Chusero II.	-	1159	Ibrahim IL	-	-	1516

GHORIAN, or GAURIAN Emperor.

Mahomed II, or Mahomed Ghozi	-	1184
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PATAN, or AFGHAN Emperors.

Cutub	-	1205
Eldoze	-	
Aram	-	1210
Altumsh or Ilumsh	-	
Feroze I.	-	1235
Sultana Rizia, Empress	-	1236
Byram II.	-	1239
Musaood IV.	-	1242
Mahmood II.	-	1245
Balin	-	1265
Keikobad	-	1286
Feroze II.	-	1289
Alla I.	-	1295
Omar	-	1316
Mubarick I.	-	1317
Tuglick	-	1321
Mahomed III.	-	1325
Feroze III.	-	1351
Tuglick II.	-	1388

Began his Reign A. D.

Mahomed IV. - - - } 1389

Abu-Bicker - - - } 1393

+Mahmood III. - - - }

Dynasty of the SEIDS.

Chizer - - - }

Mubarick II. - - - }

Mahomed V. - - - }

Alla II. - - - }

Dynasty of LOST.

Beloli - - - }

Secunder L - - - }

Ibrahim IL - - - }

MOGUL, or MUNGUL Emperors.

Baber - - - }

Humaioon - - - }

Second PATAN Dynasty.

Shere - - - }

Selim - - - }

Mahomed VI. - - - }

Ibrahim III. - - - }

Mogul Dynasty restored.

Humaioon - - - }

Acbar - - - }

Jehanguire - - - }

Shah Jehan - - - }

Aurungzebe, or Allumguire I. - - - }

Bahader Shah - - - }

Jchaundet Shah - - - }

Ferokscre - - - }

Ruffieh-ul-Dirjat - - - }

Ruffieh-ul-Dowlah - - - }

+Mahomed Shah - - - }

Ahmed Shah - - - }

Allumguire II. - - - }

Shah Aulum - - - }

* He began his reign in Ghizni, A. D. 977.

+ Tamerlane's invasion happened in this reign;

§ And Nadir Shah's in this.

and the first of the month of April
the second of the month of April
the third of the month of April
the fourth of the month of April
the fifth of the month of April
the sixth of the month of April
the seventh of the month of April
the eighth of the month of April
the ninth of the month of April
the tenth of the month of April
the eleventh of the month of April
the twelfth of the month of April
the thirteenth of the month of April
the fourteenth of the month of April
the fifteenth of the month of April
the sixteenth of the month of April
the seventeenth of the month of April
the eighteenth of the month of April
the nineteenth of the month of April
the twentieth of the month of April
the twenty-first of the month of April
the twenty-second of the month of April
the twenty-third of the month of April
the twenty-fourth of the month of April
the twenty-fifth of the month of April
the twenty-sixth of the month of April
the twenty-seventh of the month of April
the twenty-eighth of the month of April
the twenty-ninth of the month of April
the thirtieth of the month of April
the thirty-first of the month of April

M E M O I R
O F A
MAP OF HINDOOSTAN, &c.

ЯІОМЭИ

А 30

ЛІТГРОДАЛЬ ЗО ЧАІ

MEMOIR
OF A
MAP OF HINDOOSTAN, &c.

So great an extent of country is contained in this map, and the quality of the materials is so various in different parts, that it became necessary, in order to prevent confusion, to divide the account of its construction into separate sections, agreeable to the natural division of the country; and, in some measure, to the nature of the materials. It is accordingly divided into seven sections.

The first contains the sea coasts and islands.

The second, the surveyed tract on the side of Bengal; or that occupied by the Ganges and its principal branches, as far west as the city of Agra.

The third, the tract occupied by the Indus and its branches.

The fourth contains the tract between the Kistnah river and the countries traversed by the Ganges and Indus; that is to say, the middle parts of India.

The fifth contains the peninsula south of the Kistnah.

The sixth, the countries situated between Hindoostan and China; namely, Thibet, Bootan, Afsam, Pegu, Aracan, Ava, and part of Siam: and

The seventh, and last, contains Tables of distances between the principal cities, &c.

But, before I proceed to the particulars of the construction of the map, it will be necessary to explain the itinerary measure adopted

in places where no surveys have been taken. The usual measure of this kind in Hindoostan, is the *coss*, of which the standard has varied considerably at different times, owing to the caprice of certain emperors: but, it would appear, that those new standards never existed long enough to obtain an establishment in the public mind; which never lost the idea of the ancient standard.

Acbar was the first who made a great innovation in the standard of the *coss*. He directed it to be taken at 5000 guz, equal to 4757 yards; that is, about 2 British miles and 5 furlongs. And Shah Jehan, about half a century afterwards, increased the standard one-twentieth part, making the *coss* more than 2 miles and 6 furlongs.* But since the time of Aurungzebe, the ancient, or common *coss*, has resumed its place, and those of Acbar and Shah Jehan are only heard of in the histories of the times when they were in use.

It may reasonably be expected, that in a country of half the extent of Europe, the estimated length of the itinerary measures, although of the same denomination, must vary in different parts of it. It is no more than what happens in different provinces of the same kingdom, in Europe. But as far as we have any *data* for making a just comparison, the *coss* does not vary so much as one-sixth part over the whole country; and between the northern and southern extreme of India (that is, in an extent of about 1700 miles), the difference is not more than one-sixteenth part. The miles vary much more in their proportions, in the different parts of Europe.

Taking the medium of the *coss* throughout Hindoostan, and the Deccan, there will be about 40 of them to a degree of a great circle on the globe: that is, each *coss* is about a geographical mile and half. But this is to be understood of horizontal measure; in which the windings and inflections of the roads are allowed: for the estimated routes could not be applied to geographical purposes, by any other rule. The *coss*, in road measure, is about one statute mile and nine-tenths; or at the rate of 190 British miles to 100

* Captain Kirkpatrick's MSS. of which much more will be said hereafter.

cofes; one part in seven, being allowed for winding, when the line of distance is extensive. Or, seven miles of road measure, are allowed to produce six miles horizontally, or in a direct line.

In Malwa and its neighbourhood, the cofses are larger than anywhere else, and are about 1.7 geographical miles, or $\frac{35}{2}$ to a degree. And on the road from Baglana to Masulpatam, they are so short, that $\frac{46}{3}$ are required to make a degree. But having only one example for the latter proportion, I shall found no rule on it. The proportions that I have adopted for Hindoostan, Malwa, and the Carnatic, from a great number of examples, are respectively 1.48; 1.71; and 1.6 of geographical miles to a horizontal cof; or $\frac{48}{35}$, $\frac{35}{2}$, and $37\frac{1}{2}$ to a degree of a great circle. The cofs of Hindoostan proper, is therefore shorter than any other, and prevails throughout the greatest extent of country. There is again in Nagpour (the ancient Goondwaneh) a *Goondy* cofs, which by the medium of all the accounts I could get, is about 2.76 geographical miles, reduced to horizontal distance; or 21.9, or 22 to a degree. This measure appears to be in use by the natives, throughout Mundilla and Boggilcund, as well as in Nagpour; and sometimes occasions great confusion in the reports of the *cofsids*, or couriers: however, they have a computation of Hindoostanny cofses also, in the same country; and the proportions agree in general remarkably well with that scale, between the Bengal Provinces and Aurungabad; and between Mundilla and Hyderabad.

Having mentioned the windings of the roads, it may not be improper to give the result of my inquiries on this head, for the benefit of those who may have itineraries, kept in estimated distances, to work up. One in seven is allowed as above: and is what will be found to take place in large distances, in such countries as are intersected by deep rivers, or watercourses; or in such as have no artificial roads; and where those on the natural level, have obstacles to surmount. The degree of winding of roads, in different coun-

tries, is, (*cæteris paribus*) according to the state of improvement in which the roads are. In India, the roads are at best, little better than paths, and whenever deep rivers (which in that country are frequent, and without bridges), mœrass, chains of mountains, or other obstacles, oppose themselves to the line of direction of the road, it is carried round, so as to effect the easiest passage; and for this reason the roads there, have a degree of crookedness, much beyond what we meet with in European countries, where bridges are laid over every considerable watercourse, and where hills are either levelled, or reduced to a convenient degree of acclivity; and after all, expences saved in many cases, by the difference of labour between the smoothing of the direct road, and the forming of a road on the natural level. But the proportions, must, of course, vary with circumstances; and may be only one in ten, in a dry, open, country, and one that has a tolerably even surface: but this happens too rarely to found any general rule on. As the line of distance increases, a greater degree of winding will take place; or, a short distance will always be on a straighter line than a long one; for in countries where the management of the roads is not arrived at a high degree of perfection, the road through a kingdom will be made up of portions, consisting of the particular roads leading from one city, or principal town, to another, although they may not lie in the general line of direction; and then there will be a general winding, added to the particular one; and the above proportion of 1 in 7, is applied to this compound winding. And, added to this, in very long distances, some natural obstacle, will, very probably, oppose itself: an arm of the sea; a river of difficult passage; a mœrass; or an impassable ridge of mountains; and change totally the direction of the road: whilst the parts, on each side of the obstacle, might have but an ordinary degree of winding: and it is seldom, but that one or other of these, occurs in the space of 150 or 200 miles. Probably 1 in 8 may be a pretty just general proportion for distances of about 100 miles; that is, 8 miles by the

road, will be seven direct; or what is commonly termed *bird-flight*: and where the extent is from 200 to 300 miles, 1 in 7.

Measured distances in Hindooostan, do not often occur, where, at the same time, the true horizontal distance is given, except in Bengal: and that is a country too full of deep rivers, lakes, and morasses, to serve as a general standard. In the Carnatic, a drier country, the medium of winding, in distances of about 100 miles, is 1 in 9. In England, as far as we can trust the maps (which may be done, where the distance consists chiefly of *difference of latitude*), 1 in 11 is the proportion, in distances of about 100 miles; and in very great distances, such as Edinburgh, 1 in 7.

It may happen that the direct route may lie through a desert or an ill-governed country; in which case, travellers will avoid the way, in which famine, or robbery, threatens them; and by these means be carried out of the true line of direction: but it is obvious that no rule can be given for such cases. Upon the whole, the degree of winding, as far as depends on natural causes, must be estimated by the compound ratio of the length of the line of distance, and of the nature of the country, as to evenness, dryness, and openness. And of course, some local knowledge of it will be required, in order to correct the distances in a just degree.*

M. D'Anville concludes his inquiry † into the length of the cofs, by determining the number in a degree, on a medium, to be 37; but it must be observed, that he had no measured lines with which he could compare his estimated distances. On the other hand, in the respective distances of Candahar, Cabul, and Attock, as described by him, each degree contains 47 of Tavernier's coffes.

* Those who wish for a general rule for changing horizontal distance into road distance, in their common references to maps, in general, may break the line of distance (if very long), into portions of not more than 100 or 150 miles; and then add to the whole sum of the distances, so obtained, one eighth part. These portions should be contrived, so as severally to include the spaces, between the points, that diverge most from the general line of direction of the whole road. By this means, the errors arising from the compound winding, will be avoided.

† Eclaircissements, p. 14.

SECTION I.

The SEA COASTS and ISLANDS.

CALCUTTA is the point I shall set out from, as well from its being determined by several observations of longitude and latitude, as from its having a measured line of considerable extent stretching from it, both to the east and west. I shall first pursue the route westward to the mouth of the Indus; and then return to Balasore, and go eastward to the entrance of the strait of Malacca.

Calcutta, the capital of the British possessions in India, as being the residence of the General Council, has its citadel placed in latitude $22^{\circ} 33'$ north; and in longitude, by a mean of the observations of four different gentlemen, $88^{\circ} 28'$ east from Greenwich.*

Balasore, situated about 101 geographical miles † from Calcutta, is the extreme point of the Bengal survey on the SW; or on the quarter towards Madras. Colonel Pearse's return from the Carnatic, after the termination of the late war, afforded an opportunity of extending a measured line from Madras to Balasore, which had long been a *desideratum*; as the exact positions of the intermediate stations of Masulipatam, Visagapatam, Ganjam, and Cattack, points on which many others eventually depended, were wanted: and although there might be no great reason to suppose that Masuli-

* All the latitudes mentioned in this work, being north of the Equator, and all the longitudes east of the meridian of Greenwich. I shall in future mention only the terms latitude and longitude, leaving the species of each, to be understood.

† I have made use of Geographic miles, or those of 60 to a degree, in the account of the construction of the map; and of British statute miles in giving the comparative extent of countries. They are distinguished by G. miles, and B. miles.

patam and Visagapatam were much out of place in the former map, yet Ganjam and Cattack were doubtful. Col. Pearse's industry and attention have amply supplied what was wanting, within this line. He directed the whole to be measured with a perambulator; and corrected each day's work, or at least, every considerable interval, by observations of the latitude; and the general course being little more than 3 points from the meridian, the differences of latitude, were applicable to the correction of the distance through each particular interval; and for a check on the whole, we had already in our possession, observations of longitude repeatedly taken at Calcutta and Madras. The whole extent of Col. Pearse's measured line, in road distance, was near 900 British miles; a work of no small labour.

The longitude of Fort William, the citadel of Calcutta, as above-said, taken at $88^{\circ} 27' 45''$,* from the mean of 4 observers; and that of Madras $80^{\circ} 24' 40''$,† from the mean of 3 observers, gives a difference of meridians of 8 degrees, 3 minutes. It remains then, to compare with this, the difference of longitude found by Col. Pearse's measured route, as communicated by Lieut. Colebrooke, in the map drawn by him, and sent to the East-India House.

Balasore, by the survey, is $1^{\circ} 26' 30''$ west of Fort William, and must therefore be in $87^{\circ} 1' 30''$. Col. Pearse reckons it $1' 15''$ more westerly; but I adhere to the survey. From Balasore to Ganjam in lat. $19^{\circ} 22'$, Col. Pearse reckons 95 miles of westing, or $1^{\circ} 41' 26''$ difference of longitude; which brings Ganjam in lon. $85^{\circ} 20' 4'$.‡ And from Ganjam to Madras he made $5^{\circ} 2' 18''$ west: whence the

Hon. Thomas Howe	$88^{\circ} 33'$	Mean $88^{\circ} 27' 45''$
Rev. Mr. Smith	$88^{\circ} 28'$	
Mr. Magee	$88^{\circ} 24'$	
Capt. Ritchie	$88^{\circ} 26'$	

To which may be added the French observation at Ghyretty, which place is 1° east from Calcutta.

Mr. Howe	$80^{\circ} 29'$	Mean $80^{\circ} 24' 40''$
Mr. Dalrymple	$80^{\circ} 24'$	
Mr. Topping	$80^{\circ} 21'$	

* Mr. Mears's observation was $85^{\circ} 17'$ by \odot and 2 , 1770.

longitude of Madras would be $80^{\circ} 17' 44''$. Here is found an excess of about 7 minutes difference of longitude; the measurement giving so much more than the observations. But in examining the map abovementioned, it appears that the difference of latitude between Ganjam and Madras by account, exceeded that by observation $8' 50''$; and if this is to be imputed to excess of distance (which is highly probable) an excess of longitude must also have taken place; and this error will amount to about $6' 48''$; or nearly the difference in question. This trifling error of 7 minutes in a difference of meridians of 6 degrees and a half, to whatever it may be owing; whether to overmeasurement by the wheel; variation of the compass; defects in the instruments; or errors in the observations of longitude; or partly to all these causes; is very immaterial to general geography. The result shews, that we may consider the difference of meridians between the two places, as determined near enough for the purposes of navigation, or general geography.

I must not omit to mention that Capt. John Ritchie, by direction of the Bengal Government, in 1770 and 1771, took the bearings and distances in a general way, from Madras to Balasore; and his result came within one minute of the longitude by observation. But some of his intervals were not well proportioned. His position of Masulipatam, indeed came out only $1'$ to the east of Col. Pearse's; but Visagapatam was $7'$, and Ganjam $22'$ more westerly.

Although Col. Pearse's route serves to fix most of the principal places on or near the coast, yet oftentimes it deviated considerably, and for a length of space, from the coast; as between Balasore and Jagarnaut; and between Visagapatam and Ongole. These blanks are supplied from the materials of Capt. Ritchie, Major Stevens, Col. Polier, Mr. Cotsford, and others.

First, from Balasore, to Point Palmiras. This was done by Capt. Ritchie, by a series of triangles, formed by three surveying vessels; and corrected by observations of latitude. The result,

placed Point Palmiras, directly south of Balasore: that is in lon. $87^{\circ} 1' 30''$; lat. $20^{\circ} 44'$. From Point Palmiras to Jagarnaut Pagoda, the coast was traced in a more cursory manner; and accordingly, the bearing and distance between Balasore and Jagarnaut is very differently given by Col. Pearse and Capt. Ritchie: the account of the former being only $54^{\circ} 30''$ difference of longitude; and that of the latter, $1^{\circ} 16'$. This very considerable difference is too striking, not to be particularly noticed; and requires that some observations should be made with time-keepers, to ascertain the relative positions of Jagarnaut, Point Palmiras, and Balasore. Wherever the mistake may lie, it is of great importance to have it rectified: for if Col. Pearse's bearing be true (and there appears no reason to doubt it) there must be a very considerable error in the course between Jagarnaut, and Balasore road, in Capt. Ritchie's chart. (See the Index, under *Orissa*.)

The longitude of Cattack is scarcely altered from what it was in the former map of India; where it was placed on the authority of Capt. Campbell, in lon. 86° . It is now in $86^{\circ} 1' 30''$; and its latitude stands as before.

From Jagarnaut to Ganjam, the particulars of the coast, are from Col. Pearse's map, collated with those of Ritchie's and Campbell's. From Ganjam to Poondy, is taken from the map of the Itchapour district; and Col. Pearse's route on it, which may be traced from Ganjam to Bindi (near Poondy) furnishes the means of correcting the compass of that map, which was faulty in a very considerable degree. Bindi serves as a connecting point for the two maps; as Nauparah or Nowparah, a little farther to the S W, does for Pearse's, and Cridland's map of the Tickley district. The coast between Poondy and Bimlepatam is sketched from Lieut. Cridland's map, from Col. Polier's journal, and other MSS. From Bimlepatam to Visagapatam is from Col. Pearse; and from thence to Coringa from a MS. map, compiled during Col. Forde's expedition to Masulipatam, in 1759; collated with Capt. Ritchie's map.

As there have been some observations taken at Visagapatam to ascertain the longitude, it is proper to take notice of them, and to compare the result with the longitude deduced from Calcutta and Ganjam, by Col. Pearse's line. This gives 107.1 miles of westing, or $1^{\circ} 52' 54''$ difference of longitude, from Ganjam to Visagapatam; from which if we deduct the proportion of the error in the distance (see page 10) the true difference of longitude will be $1^{\circ} 50' 39''$; which taken from $85^{\circ} 20' 4''$, the longitude of Ganjam, leaves $89^{\circ} 29' 25''$ for that of Visagapatam. But Col. Pearse's observation was $84^{\circ} 23' 30''$ and Mr. Russel's $83^{\circ} 21' 30''$. Its latitude is $17^{\circ} 42'$.

From Coringa to Masulipatam, the figure of the coast is from Major Stevens, as Col. Pearse's route goes far inland, by way of Rajamundry, Ellore, &c. and does not again approach the coast near enough to determine its position, till it comes to Vantipollam, near Ongole. These maps of Major Stevens's and of Col. Pearse's join, at these points, viz. Siccacollum, on the bank of the Kistnah; at Rajamundry; and at Samulcota. And they differ very considerably in the extent between Siccacollum and Samulcota; Major Stevens's giving $6\frac{1}{2}$ miles less than the other; but, I believe, Major Stevens's distance was measured, only in that part which lies between Siccacollum and Narsapour.

Masulipatam has its position very satisfactorily determined, by Major Stevens's measurement from Siccacollum, a place in Col. Pearse's map. It is 17.4 G. miles east; and 3.3 south of it; and comes out $48'$ of longitude, east of Madras, or corrected (see again page 10) $47'$; its longitude being $81^{\circ} 12'$; lat. $16^{\circ} 8' 30''$.

From Masulipatam to Madras, the figure of the coast, is generally from Capt. Ritchie, corrected in certain points by the land survey of Col. Pearse. For as the latter came close to the coast at Vantipollam, Carwaree, and Ramecapatam, it appeared that Capt. Ritchie's chart required correction in the great bay between the latter place and Point Divy. I found it necessary also to reduce

the point at the mouth of the Pennar river, and make it less prominent; as the distance from Nellore to the nearest sea coast, would otherwise have been much too great.* Indeed, it was not expected that by sailing along a flat coast, nearly straight, without landmarks, every small bending of the coast could be ascertained.

It is proper to remark, that the whole difference of longitude between Calcutta and Madras, in M. D'Anville's and D'Apres' maps, comes within a few miles of the truth, as they were in possession of the observations taken at Ghyretty and Pondicherry: but their maps are exceedingly faulty in the detail.

The longitude of Madras, or Fort St. George, as was said before, (page 9) is taken at $80^{\circ} 25'$: and its latitude is $12^{\circ} 5'$. Pondicherry, by a series of triangles obtained by means of the Jaghire map, Wandiwash Hill, Permacoil, the Red Hills, and the difference of latitude, I make to be $25'$ of longitude, west of Madras; so that Pondicherry will be in 80° just. The mean of the different observations taken there, is $79^{\circ} 55' 40''$.† Mr. Pringle, who measured the routes of Sir Eyre Coote's army, during the late war, makes the difference of meridians the same as I do, to a fraction. Its latitude is $11^{\circ} 56'$.

Cuddalore, in lat. $11^{\circ} 41'$ and lon. $79^{\circ} 45' 45''$, is the most southern point, determined by Mr. Pringle's measured routes: but the same gentleman furnishes us with the bearing of Portonovo from that place; which, with its latitude $11^{\circ} 30'$, allows us to place it, almost to a certainty, in lon. $79^{\circ} 53' 30''$.

The position of Chillambrum Pagoda, in respect of Portonovo, although so conspicuous an object to the sight, is variously represented. By the mean of what appeared to me to be the best authorities, I have placed it south-west $7\frac{1}{2}$ G. miles from Porto-

* I have allowed Point Pennar to be 16 G. miles to the east of Nellore: most of the MS. maps make it less.

+ Con. de Temps $79^{\circ} 57'$
Gentil - $79^{\circ} 53'$
Topping - $79^{\circ} 57'$

} Mean $79^{\circ} 55' 40''$.

novo. Mr. Barker determined its position with respect to Devicotta, by a measured base, to be W $16^{\circ} 45'$ N 8 G. miles; which added to the former line from Portonovo, gives $79^{\circ} 55'$ for the longitude of Devicotta. Its latitude appears to be $11^{\circ} 21'$. Most maps allow a much greater distance between Portonovo and Devicotta, than what arises from the above construction; which is 9 G. miles on a S S E bearing: and the foundation of the error appears to me to be the giving the bearing of Devicotta from Chilambrum, too great a degree a southing.

From Devicotta, southward to Negapatam, my authorities are some MS. maps; among which, is one, drawn by M. D'Anville, containing the principal positions between Madras and Tanjore; and seems intended for the basis of a map of the south Carnatic.

Had M. D'Anville's differed from the others, I should have been inclined to give the preference to the result of his investigations; but it happens that all the different maps I have consulted, differ so little among themselves, that none make the difference of longitude between Devicotta and Negapatam more than $1' 45''$; and the mean of the whole is $1' 15''$ east; so that Negapatam may be taken at $79^{\circ} 56' 35''$ lon.; and latitude $10^{\circ} 46'$.

Thus Negapatam appears to be $9' 25''$ west of Pondicherry, or $98' 95''$ from Madras; and whatever error there may be, must arise chiefly between Devicotta and Negapatam. If there be any, the different geographers and map-makers have all fallen into the same kind of error. I observe that the different maps made of late years, in India, have considered Negapatam as being in lon. $79^{\circ} 53'$ to $79^{\circ} 54'$. I know not whence the idea is taken; but, whether founded or not, it differs but little from mine.

Negapatam is the southernmost point, on the eastern side of the peninsula, whose position can be reckoned tolerably exact; unless we except Point Calymere, whose bearing being pretty well known from Negapatam, and its latitude determined with precision; may be considered as being nearly as well ascertained as

Negapatam, on which it depends. Its latitude is $10^{\circ} 20'$; and longitude $79^{\circ} 54' 30''$.

No connected measured line that can be depended on, has yet been carried across the peninsula; Col. Fullarton's marches, measured by Col. Kelly, extending only to Palicaudcherry; that is, not within 50 G. miles of the coast of Malabar: and those extended southward, through Madura and Tinevelly, ending at Cape Comorin. Fortunately, however, we have a series of longitudes by a time-keeper, deduced from Bombay, by Capt. Huddart, and extended at intervals, along the whole coast, to Anjenga; of which, more will be said hereafter.

Col. Fullarton's march into the southern countries of the Carnatic, gave an opportunity of measuring the distances, and ascertaining the relative positions of Tanjore, Trichinopoly, Madura, Coimbettore, Palicaudcherry, &c. in respect of Negapatam, where the march commenced. The plan of these marches communicated to me from the East-India House, bears the name of Col. Kelly; and is declared to be actually measured, through the points above-mentioned. We have to regret that the same attention was not bestowed in the march from Calicut to Palicaudcherry; the intended point of junction of the Bombay detachment, with that of Col. Fullarton: for, in that case, the exact width of the peninsula, had been no longer a matter of inquiry.

Trichinopoly comes out, by the above map of Col. Kelly's, to be $1^{\circ} 10'$ of longitude west from Negapatam; which taken from $75^{\circ} 56' 35''$, leaves $78^{\circ} 46' 35''$ for the longitude of Trichinopoly.* The latitude is $10^{\circ} 49'$.

Madura, by the same authority, is 34' difference of longitude west from Trichinopoly, that is, in lon. $78^{\circ} 12' 35''$. Here it must be noted, that great discordance arises between the different accounts

* A map, drawn by Baron Wersebe (of the Hanoverian corps) accords in this particular, and indeed, in every other material one, with that of Col. Kelly; but I have no knowledge how Baron W. procured his materials.

of the bearing and distance between Tritchinopoly and Madura, as given by Kelly, Montresor, and others. The two former differ 1,6 G. miles only in distance; but Col. Kelly's bearing, gives 12,3 G. miles, more of westing, than Montresor's. And a third map, communicated by Mr. John Sullivan, has the same bearing with Kelly's, but exceeds it, 3,7 G. miles, in distance; thereby, increasing the westing 1,3 G. miles; and of course, exceeding Montresor's 13,6 G. miles, or 14° 15' of longitude.

The latitude of Madura, I have not yet learnt. Sir John Call's map places it in 9° 52' 30"; and Col. Kelly's difference of latitude from Tritchinopoly, 53' 12", gives 9° 55' 48".

The authority for the remainder of this line, through Palamcotta (or Tinevelly) to Poolytopu on the sea coast, westward of Cape Comorin, is from the map of Madura and Tinevelly, made under the direction of Sir. J. Call (then Chief Engineer at Madras) and from Mr. Pringle's road distances; together with the latitudes of Palamcotta and Poolytopu. First, I find in Sir J. Call's map, 1° 9' 30" difference of latitude S between Madura and Palamcotta; and 18' of longitude, west. This would place the latter in 8° 43' (Mr. Pringle informs us, that its latitude is 8° 44') and in lon. 77° 54' 35". Then, from Palamcotta to Cotate or Cotaur, on the west of the Gauts, Sir J. Call's map gives 29' 12" difference of latitude S; and 22' difference of longitude west; to which, if we add the deduction from Mr. Pringle's measured distance to Poolytopu, 5' 30" difference of latitude S; and 6' difference of longitude west;* the whole difference of latitude will be 34' 42" S, and difference of longitude 28' west; giving for the position of Poolytopu, lat. 8° 9' 18"; lon. 77° 26' 35".

Poolytopu village appears to be situated on the sea coast, E N E 4 G. miles from Cadiapatain Point; which point, by Mr. Howe,

* The bearing between Cotate and Poolytopu, is inferred from some MS. maps of no great authority, to be about S W 1/2 W. The whole distance being only 8 G. miles, the difference of longitude would be but little affected, by any error that might reasonably be expected in the bearing.

is reckoned in lat. $8^{\circ} 7'$; and Poolytopu being about $1' 30''$ to the N of it, should be in $8^{\circ} 8' 30''$, according very nearly with the above calculation. It must, I think, be acknowledged, that there is nothing in this deduction, that appears forced. Poolytopu, by the best account I can get (a French MS. map in Mr. Dalrymple's collection), is $16'$ of longitude west of Cape Comorin; which Cape, by this account will be in lon. $77^{\circ} 42' 35''$.

We have some further light thrown on this subject by the measurement of the road, by Mr. Pringle, from Tanjore to Poolytopu. His whole road distance is $251\frac{1}{2}$ B. miles; and allowing 1 in 9* for the winding of the road, the horizontal distance will be $223\frac{1}{2}$ B. miles, or 193 G. miles; which, on the same bearing as the above deduction is founded on ($S\ 33^{\circ} 40' W$), gives difference of latitude $2^{\circ} 41' 18''$; and westing $107\frac{1}{4}$; or difference of longitude $1^{\circ} 49'$. As Tanjore is in $10^{\circ} 46' 30''$, the latitude of Poolytopu comes out $8^{\circ} 5' 12''$, and its lon. $77^{\circ} 23' 15''$ (the longitude of Tanjore, by Col. Kelly's measurement, being $79^{\circ} 12' 15'$, deduced from Negapatam) and $16'$ added to it, gives for the longitude of Cape Comorin $77^{\circ} 39' 15''$, or $3' 20''$ to the west of the first calculation.

Again, if the proportion of 1 in 8 be adopted for the winding of the road (a more common one), it produces 190 G. miles † of distance; and the latitude of Poolytopu will be $8^{\circ} 8'$; and its lon. $77^{\circ} 20' 50''$; and that of Cape Comorin $77^{\circ} 36' 50''$.

This is all the satisfaction that I have been able to obtain, concerning the longitude of Cape Comorin, as deduced from the eastern side of the peninsula. Something depends on the truth of the assumption, respecting the position of Negapatam; and still more

* The road from Madras to Trichinopoly had a winding of	1 in 9	Mem: 1 in 8½
Trichinopoly to Vellore	1 in 10	
Madras to Tanjore	1 in 9½	
Wandiwash	1 in 8	
Curongoly	1 in 9½	
Arrot to Wandiwash	1 in 7	

† The distance arising on the lines of Kelly and Call is 186,25 G. miles.

on the accuracy of the map of Tinevelly, the history of which, I am unacquainted with: but, I think, the near coincidence of Mr. Pringle's measurement, with it (for I reckon $5' 20''$ but a trifle in general geography) is a presumptive proof of its general truth. It is understood that there is from 1 to 2 degrees of westerly variation, between Negapatam and Cape Comorin; if this be allowed, it will remove the Cape $4' 30''$ further to the west; and place it, according to Kelly's and Call's lines, in $77^{\circ} 38' 5''$.

Let us now turn to the other coast, and observe how Capt. Huddart's and Capt. Dundas's deductions of longitude, from the west to Anjenga, accord with the reputed space, contained in the interval between Cape Comorin and Anjenga; which space, by Mr. Dalrymple's observation of the difference of longitude shewn by his time-keeper, in 1777, was $52' 30''$. This, taken from $77^{\circ} 38' 5''$, leaves $76^{\circ} 45' 35''$ for the longitude of Anjenga.

Capt. Huddart's longitude of Anjenga, deduced by time-keeper from Bombay, reckoned in $72^{\circ} 40'$ is - $76^{\circ} 39'$

Capt. Dundas's	-	-	$76^{\circ} 30'$
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Mr. Dalrymple's	3	-	$76^{\circ} 38'$
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As Capt. Huddart's series of longitudes commenced at Bombay in lat. $18^{\circ} 58'$, and were continued to Anjenga in lat. $8^{\circ} 39'$, and then back again to Bombay; by which the error of his time-keeper was ascertained, and which was only as much as amounted to $2\frac{1}{4}$ minutes of longitude; we have every reason to be satisfied with this series, as far as respects general positions: and indeed, geography is greatly indebted to the labours of this gentleman, who has presented us with the longitudes of 16 places on this coast, and by that means given the true general figure of it, which exhibits, to those who have been in the habit of contemplating it, a very different form, from what it ever did before.

I am of opinion that more dependance may be placed on Capt. Huddart's longitude of Anjenga, deduced from Bombay, in the manner abovementioned, than on any other account: but at the

same time I have adopted Mr. Howe's observation of longitude at Bombay, as it appears the most consistent with other accounts. I do not mean by this, to determine on the merits of the different observations (of which indeed, I am incapable), but rather because it accords with the observation taken at Goa, and with the routes across from Negapatam to Tanore; and, as far as may be judged, with the deduction from Negapatam to Cape Comorin. It is true, that if Montresor's position of Madura is admitted, it will place Cape Comorin $12'$ farther eastward; and if the variation be not allowed, there will be $4' 30''$ more to be added; in all $16' 30''$, or the full difference between Capt. Howe's, and Capt. Huddart's observations; the one being $72^{\circ} 38'$, the other $72^{\circ} 54'$.

It now remains, after this investigation, to be shewn, in what manner I have compounded the above differences; that no distortion of the intermediate parts should take place. Anjenga, I have placed in $76^{\circ} 40'$, being the mean of all the different accounts, by observation; and by deduction from Negapatam. Mr. Dalrymple's difference of lon. $52' 30''$ to Cape Comorin, is then adopted, which places the Cape in $77^{\circ} 32' 30''$. Madura, is placed in $9^{\circ} 59'$, the latitude given by Call; and its longitude is determined by Col. Kelly's distance from Tritchinopoly, with the addition of 3 miles to it; that is, in lon. $78^{\circ} 11'$; and Palamcotta in lat. $8^{\circ} 42'$, and lon. $77^{\circ} 49' 15''$; according to the proportions furnished by Call and Pringle, between Madura and Poolytopu.

The form of the coast between Madras and Cape Comorin, is from various authorities. The survey of the Company's lands (or Jaghire) extends beyond Alemparvē. From thence to Negapatam, is from a French MS. map, collated with D'Anville's map of positions (above spoken of) and several particulars between Pondicherry and Portonovo, from Mr. Pringle's map of the marches. The mouth of the Coleroone is from an English MS. map. From Negapatam to Tondi, is chiefly from Major Stevens's, and my own observations: from Tondi to Good-water Island, Major Stevens's

alone: from thence to Tutacorin, Capt. Delafield's cursory survey: and the remainder to Cape Comorin, is from Sir J. Call's map of Tinevelly; corrected occasionally by a printed chart, published by Mr. Dalrymple. It is not pretended that any of these points beyond Cuddalore, are ascertained with precision: but it is highly probable that Point Calymere cannot be out in its longitude 4 minutes. Tondi has the bearing and difference of latitude from Point Calymere to correct its position; and there was also a line drawn from it to Tanjore. Ramanad is fixed by the intersection of two lines, from Madura and Tondi; and therefore must partake of the errors incident to Tondi, and Point Calymere. The Point of Ramiseram is also dependent on Tondi. When I constructed the map of India, in 1782, I concluded that the respective distances between Tondi, Tritchinopoly, and Devicotta, had been measured, and that I worked on sure ground: but I have since been convinced of the contrary.

From Cape Comorin to Anjenga, the particulars of the coast, appear to be either little known to us, or very ill described; as the reports of it are various and contradictory. Between Cape Comorin and Ruttera Point, I took the particulars from a French MS. chart, the scale of which appears to be faulty; for it gives only 35 G. miles of distance between Cape Comorin and Point Ruttera; and the difference of latitude only $19' 48''$; by which the latitude would be only $8^{\circ} 14'$; whereas, it cannot well be under $8^{\circ} 20'$, according to Mr. Howe's observation: and Mr. Dalrymple observes that Ruttera Point is nearly 29 G. miles from that of Cadiapatam, which is about 19 from Cape Comorin. On these ideas, I have extended the distance to $46\frac{1}{2}$ miles; and still Ruttera is only 28' from Cadiapatam. M. D'Apres' account of the bearings and distances between Cape Comorin and Anjenga, gives 42' difference of longitude; but then his chart contradicts that account, and gives $44\frac{1}{2}$; besides an absolute discordance in particulars. Mr. Pringle measured only $49\frac{1}{4}$ B. miles of road distance, between Pooiytopu and

Anjenga, which cannot be more than 98 G. miles of horizontal distance: and falls short of my expectations, more than 9 miles. All that I could do, was to give the coast such a form, as my mind had conceived of it, by perusing these different accounts: at the same time, I confess, none of them appear conclusive: and until we know the exact position of Poolytopu, in respect of Cape Comorin, we cannot allow Mr. Pringle's measurement to discredit in the least Mr. Dalrymple's difference of longitude. We may here observe, by the way, that coasts of such rotundity of figure, as the termination of this great peninsula, are seldom so well determined, as those that embay, and where the same point remains long in view, and is of easy discrimination. Here the projecting points succeed each other too rapidly to allow a sufficient degree of precision in calculating either the bearing, or the distance. The latitude of Cape Comorin I have taken at 8 degrees.

Coylan or Quilon, a Dutch factory about 14 G. miles to the N NW or N W of Anjenga, is the next place, whose longitude is noted by Capt. Huddart; but as it cannot be expected that places differing only a few minutes of longitude from each other, can be determined with precision by this means; I shall pass on to Porca, another Dutch factory, in lat. $9^{\circ} 15'$, and longitude by Capt. Huddart $76^{\circ} 10'$. I can by no means reconcile this longitude with the Dutch MS. maps of this coast; for as the difference of longitude between Cochin and Porca by Capt. Huddart is only 8', the bearing ought to be S 10° E; whereas in the map, it is S 25° E. In order not to do too much violence to either report, I have allowed 16' difference of longitude, instead of the 8' of Capt. Huddart's and the 10' of Capt. Dundas. The Dutch MS. in question contains the whole coast from Coylan in lat. $8^{\circ} 51'$, to Cranganore in lat. $10^{\circ} 23'$; together with that vast assemblage of lakes, that extend in some places 30 miles inland; and are the repositories of the waters that spring from the west side of the Gauts; the whole country hereabouts being very flat, marshy, and unwholesome. This

MS. map, which is also in Mr. Dalrymple's collection, contains a most valuable addition to the geography of this part of the peninsula.

Cochin, the principal settlement of the Dutch, on this coast, is the next place in Capt. Huddart's table of longitudes: and is reckoned by him, in $76^{\circ} 2'$; lat. $9^{\circ} 58'$. Capt. Dundas makes it $75^{\circ} 58'$; and M. D'Apres, in his new *Neptune Orientale*, $76^{\circ} 3'$.

Capt. Huddart has not noted the longitude of any place between Cochin, and Tellicherry, in lat. $11^{\circ} 48'$: and there being only a single observation at the latter, I am inclined to pass over the consideration of it; and proceed to the next point of observation, Mount Dilla (or Delly) where 3 observations were taken. Mount Dilla is a remarkable promontory situated in lat. $12^{\circ} 1'$; lon. $75^{\circ} 2'$; or 1° west of Cochin.

We have two accounts of the bearings of the coast between these places: the one from M. D'Apres; the other has its particulars from different authorities. Neither of the two, differ essentially; and it is necessary to examine them carefully, as the result is to be used in comparing the longitudes of Paniany and Tanore, deduced from Capt. Huddart's observations; with that deduced from the marches of the Colonels Fullarton and Humberstone, across the peninsula.

M. D'Apres' account is as follows:

Cochin to Cranganore	N by W	-	$25\frac{1}{2}$	G. miles.
— Paniany	N $7^{\circ} 15'$ W	-	21	
— Calicut	N N W	-	42	
— Mahé	N W by N	-	30	
— Mount Dilla	N W	-	30	

The whole, added together, gives a bearing of N $25^{\circ} 30'$ W, distance 144.5 G. miles; on which, the difference of latitude is $2^{\circ} 10' 30''$, and westing 10,62. But as the true difference of lati-

tude is only $2^{\circ} 3'$, there is an excess of 7.5 in northing, and 3.6 in westing; and the corrected departure, 58.4, gives the same difference of longitude as set forth in Capt. Huddart's table.

The second series of bearings and distances, are these:

Cochin to Cranganore (by the Dutch)

MS. map) -	N 12° W	24.9 G. miles.
— Paniany (by D'Apres) -	N $7^{\circ} 45'$ W	21
— Tanore (by D'Auvergne)	N 20° W	14.7
— Calicut (by ditto) -	N $19^{\circ} 45'$ W	24.3
— Mahé (by D'Apres) -	NW by N	30
— Mt. Dilla (by De Funck)	NW by W	28.4

This series, corrected by the difference of latitude, gives about $2'$ of longitude, more than that of D'Apres; a matter hardly worth considering.

Paniany is much the same in both accounts; and when corrected in position, by the proportion applied as above to D'Apres' series, will be in lat. $10^{\circ} 41' 45''$, lon. $75^{\circ} 55'$; or $7'$ west of Cochin. And Tanore, by D'Auvergne's account of its position, in respect of Paniany, will be in lat. $10^{\circ} 55'$, and lon. $75^{\circ} 49'$; or $13'$ west of Cochin.

It may be observed that De Funck's bearing of Mount Dilla from Mahé is NW by W, while that of D'Apres is NW, and 1.6 more in distance. The fact is, that the compass in De Funck's plan is erroneous, the bearing of Mount Dilla being there W $22^{\circ} 45'$ N from Mahé; and W $23^{\circ} 30'$ N from Tellicherry; although the difference of latitude requires it to be almost a point more northwardly. The true bearing is still a *desideratum*, but I have obtained an approximation towards it, by means of bearings taken by two ships in Tellicherry road. By the mean of these, the bearing

of Mount Dilla from Mahé, appears to be W $33^{\circ} 15'$ N* or nearly NW by W; and the distance on De Funck's plan (which is understood to be measured) is 28.4 G. miles. This gives $24' 30''$ difference of longitude, or $75^{\circ} 26' 30''$ for the longitude of Mahé; whose latitude is $11^{\circ} 45' 18''$. And Tellicherry being by the same plan $3' 30''$ west of Mahé, will be in $75^{\circ} 23'$ lon. and lat. $11^{\circ} 48'$. Capt. Huddart's table gives only $16'$ difference of longitude between Mount Dilla and Tellicherry, although stated above to be $21'$; but I have before observed that these sort of observations are more to be depended on, in great differences of longitude than in small ones: not to mention that in the calculation of these differences, the actual place of observation (that is, on board the ship at anchor in a road, or coasting along shore) is often adjusted to the place whose longitude is to be recorded, and which may be styled the nominal place of observation, by estimated distances.

Deducing the longitude back again from Mount Dilla to Tanore, a difference of $2'$ must of course be expected, as the two series of bearings give that difference in the longitude; and Tanore will be $75^{\circ} 51'$, or $2'$ more easterly than the deduction from Cochin in the last page.

And now it will be proper to examine how far the lines of bearing and distance, drawn by Col. Kelly, and Lieut. D'Auvergne, across the peninsula, in the parallels of Tritchinopoly and Tanore, agree with the results drawn from Capt. Huddart's observations.

Col. Kelly's survey of Col. Fullarton's march to Palicaudcherry, was, according to the paper accompanying it, in the East-India House, measured the whole way. The result, according to the

* One of these bearings was N.W. $\frac{1}{2}$ W at $\frac{1}{2}$ of a mile off shore: the other, said to be $2'$ off shore, was NW by W. By reference to a plan of the road, it appears that the latter station could have been only $\frac{1}{2}$ off shore, as the depth of water was no more than $5\frac{1}{2}$ fathoms. We may observe that Mount Dilla should have bore more westerly from the observer that was nearest the shore, than the one furthest off: but there is seldom much nicety observed in taking bearings on shipboard, although so much depends on it. By calculation, the difference of the angle between an observer at $\frac{1}{2}$ off shore, and another at Mahé, would have been $37' 15''$ and that at $\frac{1}{2}$ off shore, $3' 30''$. So that Mount Dilla would bear from Mahé by the first compass W 36° N, and by the second, W $30^{\circ} 30'$ N: the mean of which is W $33^{\circ} 15'$ N.

map, gives 184.25 G. miles of westing from Negapatam, or $8^{\circ} 7' 48''$ difference of longitude; placing Palicaud in $76^{\circ} 48' 47''$; and in lat. $10^{\circ} 51'$; that is, 5' north of Negapatam. Of the route of Col. Humberstone from Tanore to Palicaud, I have seen no less than 5 different plans; some of them differing 6' in longitude (that is, in distance), where the whole space did not exceed 57 miles. One alone among these had the author's name to it, and therefore demanded the preference: It was by Lieut. D'Auvergne. I am yet to learn whether the distance was measured or not; but I should hope and expect it was, or a great part of it; for one of the copies, and which appears to have been transmitted during the march, distinguishes between the measured and estimated parts;* the former seeming to be the part marched over, and the latter the part the detachment had yet to march. D'Auvergne's plan gives $56\frac{1}{4}$ G. miles of westing between Tanore and Palicaud, or $58' 15''$ difference of longitude; thereby placing Tanore in lon. $75^{\circ} 50' 39''$, according to the abovementioned longitude of Palicaud, deduced from Negapatam. The copies of this route, inserted in the maps of Col. Kelly and of Baron Wersebe, give only $50\frac{1}{2}$ G. miles, or $6\frac{1}{2}$ less of westing than D'Auvergne's. Another map (communicated by Mr. J. Sullivan), and probably in this part copied from D'Auvergne's, gives 57 miles; and a fifth, transmitted by an officer in Col. Fullarton's army, precisely the same as D'Auvergne's; that is $56\frac{1}{4}$.

If we adopt D'Auvergne's distance, the longitude of Tanore, deduced from Negapatam, will be - - - - $75^{\circ} 50' 39''$

Deduced from Capt. Huddart's observations at

Mount Dilla	- - - -	$75^{\circ} 51'$
And from the same at Cochin	- - - -	$75^{\circ} 49'$

Mean of all $75^{\circ} 50' 10''$

* It should be a rule observed in all plans, to note how the scale was obtained; whether by actual measurement; difference of latitude; or estimation of distances: to which may be added, that the meridian line or parallel should be drawn across the whole space in the plan, to prevent errors in measuring the angles of bearing.

Scarce any discussion of the sort could be attended with a more satisfactory result; and I think it affords the strongest presumptive proofs of the truth of Capt. Howe's observations at Bombay; from which the longitudes shewn by Capt. Huddart's time-keeper, are deduced.

With respect to my former ideas of the breadth of the peninsula, although the extent in longitude between Bombay and Madras, remains nearly as before; yet by the swelling out of the coast, on the south of Bombay, I reckoned it too narrow by about 30 G. miles in the parallel of Madras; and 27 in that of Pondicherry.

I have now concluded the discussion of the longitudes across, and round the southern part of the peninsula; and also an account of their application to the map: for a rigid adherence to difference of longitude even by observations of the above kind, between places not far removed from each other, would in some cases, distort the relative parts of the map beyond probability: and therefore, it was necessary, in some measure, to accommodate the differences, when the existing authorities appeared to carry more weight than the observations; which, as we have observed before, are subject to error, even in the application: and they are no less so, from a casual variation in the rate of a time-keeper. A series of observations, such as we have been considering, must in a general view, be regarded as decisive; but it would be hazarding too much to adopt each particular longitude, when it was contrary to every other authority. Much less can any absolute dependance be placed on lines of bearing and distance taken from maps, whose history and construction is not before us. And where more authorities than one may occur, and those not agreeing; in such cases it must be left for the judgment to determine which appears the most probable. Now, although there are strong presumptive proofs of the general truth of the relative positions of the principal point between Cud-dalore and Anjenga, yet they do not rest on the same solid foundations, as the positions in the north part of the peninsula: and therefore Cape Comorin is placed more with relation to Anjenga, than

to the eastern coast. Again, the respective differences of longitude between Anjenga, Porca, and Cochin, do not well accord with other authorities; and therefore as these differences of longitude are very small, I thought the Dutch MS. map might be better authority for them, than the differences shewn by the time-keeper. Another particular is to be noted, concerning the longitudes on the south of the parallels of Cuddalore and Mahé: (viz.) that these will be found somewhat different in the map from the above account; for when the map was constructed, I was not in possession of some papers which throw an additional light on the subject: but these differences are very trifling. Some few errors also crept into the construction; so that upon the whole, this account contains rather what the map ought to be, than what it is: though, possibly, the errors I am pointing out may be so small, that they would have escaped the notice of all but professed geographers.

Tanore and Cochin are both placed 3' to the eastward of the assigned longitude (page 23); and Negapatam 1' to the westward of what is given in page 14; by which double error the peninsula is made to be 4' narrower than was intended, in that parallel. I was ignorant at that time that there was a plan of Humberstone's march, which had the author's name to it; and therefore had taken the mean of all the others. We will now resume the subject of the construction.

The latitude of Calicut I have taken at $11^{\circ} 18'$. This city is remarkable for being the first Indian port visited by European shipping; that is, by the Portuguese, who landed there under Vasco de Gama in 1498. It was then the most flourishing place on the Malabar coast, the Zamorin or Emperor making it the capital of a very extensive state. It appears to have fallen in its consequence soon after; the new power of the Portuguese occasioning a revolution throughout the maritime parts of the peninsula.

The form of the coast between Calicut and Mahé, is taken from a sketch of Major Abingdon's. Chitwa is said to be in lat. $10^{\circ} 38'$,

by Capt. Drummond; but I cannot reconcile its situation to that parallel; as it cannot well be so near to Paniany. I have placed it in $10^{\circ} 33' 15''$.

Mangalore is the next place to Mount Dilla, in Capt. Huddart's table, and its longitude given is $74^{\circ} 44'$; lat. $12^{\circ} 50'$. For about $5\frac{1}{2}$ leagues to the NW of Mount Dilla, the form of the coast is taken from a French map in Mr. Dalrymple's collection; the rest of the coast to Mangalore, and from thence to Coondapour (or Bas-selore) in lat. $13^{\circ} 36'$, is little known as to particulars. A large river named Cangerecora, whose course is from the north-east, falls in about 4 miles to the north of Mount Dilla; previous to which, its course is parallel with the sea coast for about 11 miles, being separated only by a spit of sand. The forts of Neliuram, Ramdilly, and Matteloy are situated on this river, which is joined by several other rivers, or streams, that descend from the Gaut Mountains; which in this part approach within 22 miles of the coast. I cannot help considering this Neliuram, which is situated about 12 miles up the river, as the place meant by Nelcynda and Melcynda, by Pliny and Ptolemy; a place visited by the Egyptian and Roman ships.

We have been lately brought acquainted with the particulars of the coast between Barcelore and Meerzaw (or Merjee), by means of a map drawn by Capt. Reynolds, during the war which terminated so unfortunately for the British arms in 1783, in the Bednore country; to which this part of the coast is opposite. This map is drawn in a most masterly style, and contains near 60 G. miles of the coast; and extends inland to the foot of the Gauts, which here approach, in some places, within 6 miles of the sea, and are never more than 20 from it. It includes the positions of Bednore and Bilghay within the Gauts; and also, Onore, Batcole, and Coom-tah on the coast. We are furnished with the means of joining this portion of geography to the rest, by having the longitude of Pigeon Island determined by Capt. Huddart; and by the position of it in

respect of Fortified Island, near Onore. Pigeon Island is very small, and lies about 8 G. miles from the coast, and 15 from Onore,* and is in lat. $14^{\circ} 1'$. Its longitude is $74^{\circ} 6' 30''$.

From Meerzaw to Cape Ramas in the neighbourhood of Goa, we are but ill informed concerning the particulars of the coast. Between these, are situated the port of Carwar, and the islands of Angedive; both of them better known to the English in the early period of their India trade, and before they were in possession of Bombay. Capt. Huddart fixed the longitude of Oyster Rock in the mouth of Carwar Bay, and also that of the Aguada Point and Castle, on the north side of the entrance of Goa Bay, or road. This he makes to be in $73^{\circ} 34' 30''$; and it is worthy of observation, that the city of Goa, which is $11' 35''$ more to the eastward, and consequently in $73^{\circ} 45' 45''$ by the same account, was placed in the same position within a fraction of a minute, by the observation in the *Con. de Temps*; and which, for want of being better informed, I formerly disregarded. The positions of Cape Ramas, Angedive, and Carwar Points, are corrected in respect of Aguada, by a set of observations and bearings of the late Capt. Howe, whose attention to marine science was equal to his gallantry, and knowledge of the practical part of his profession. I have had occasion repeatedly to acknowledge the aids I have been furnished with, by means of his collection of Observations and Remarks, in the possession of Mr. Dalrymple.

The figure of the island of Goa, and its environs, to the foot of the Gaults, is taken from a Portuguese MS. map of Mr. Dalrymple's. The latitude of Goa, and of the Aguada Castle, is $15^{\circ} 28' 20''$.

Goa, the capital of the Portuguese settlements in India, and the seat of a viceroy, is a very considerable city. It was first taken possession of by Albuquerque in 1510, and from a prince of Saracen extraction, according to Jarric.

* When Fortified Island bore E $\frac{1}{2}$ N., distant $2\frac{1}{2}$ miles, Pigeon Island bore S $\frac{1}{2}$ W., and Hog Island SSE. Hog Island bears from Pigeon Island E $\frac{1}{2}$ S., distant about 7 miles.

The coast between Goa and Bombay, near 220 G. miles, is little known to us in detail; nor indeed, was the general bearing of it known, until Capt. Huddart furnished us with his series of longitudes. By his account it appears, that this coast, although in the neighbourhood of our principal marine station and arsenal in India, was described in the charts, with an error of very near a whole point of the compass, in bearing. Indeed the whole western coast of India has far too great an obliquity from the north towards the west, in all the former charts; my own not excepted.

Perhaps there are few coasts so much broken into small bays and harbours, and that at the same time have so straight a general outline. This multitude of small ports, uninterrupted view along shore, and elevated coast, favourable to distant vision, have fitted this coast for the seat of piracy; and the alternate land and sea breezes that prevail during a great part of the year, oblige vessels to navigate very near the shore. No wonder then, that Pliny should notice the depredations committed on the Roman East-India trade in his time; and although a temporary check has been given to them in our own, by the destruction of Angria's fleets, &c. yet we may expect that the practice will be continued, while commerce lasts. The pirates are protected by the shallowness of their ports, and the strength of the country within. And as pirates, they have greater natural advantages than those of Barbary, who being compelled to roam far from their coasts, have expensive outsets: here the prizes come to their own doors; and the cruisers may lie secure in port, until the prey is discovered.

The Vingorla Rocks in lat. $15^{\circ} 52' 30''$, Capt. Huddart took the longitude of, next to Goa; and made it $73^{\circ} 16' 30''$. These rocks lie about 6 or 7 miles off the shore, of which we know but few particulars, farther than that it is possessed by a piratical tribe named Malwaans. The principal ports hereabouts are Melundy or Sunderdoo, a fortified island about 10 miles to the N.E. by N of Vin-

gorla Rocks, and reduced by Commodore James in 1765: also Rairee, Vingorla, and Newtya: which last I cannot help thinking is the *Nitrias* of Pliny, near which the pirates cruised for the Roman ships.

A Dutch MS. chart assisted me in drawing the coast between Melandy and Antigherrya, an extent of about 70 G. miles. This chart was procured by Sir Joseph Banks for Mr. Dalrymple: and the tract comprised within it, contains the ports of Dewgur, Tamah, Rajapour, Rampa, Antigherrya, and also Geriah, late the capital and principal port of Angria. This place was found by Capt. Huddart to be in lon. $73^{\circ} 8'$; and its latitude is $16^{\circ} 37'$. Between Antigherrya and Bombay, are the ports and islands of Zivagee, Dabul, Severndroog, Fort Victoria (or Bancoote), Sudder-dam, Danda-Rajapour, Choule and Coolabba. At Victoria, the longitude was found to be $72^{\circ} 54'$: latitude $17^{\circ} 59'$. The latitudes alone of several of these places, helped me to settle their positions, as the coast is nearly meridional; but I hardly expect to be free from mistakes, in fixing such a number of places, within so confined a space, and with so few aids.

Bombay, the principal port and settlement of the English in this quarter, is situated in lat. $18^{\circ} 58'$, longitude by Mr. Howe's observations $72^{\circ} 38'$. I have placed it in $72^{\circ} 40'$, or 2 minutes farther to the east, which was occasioned originally by a mistake, and which would have cost too much time to rectify, had I attempted it. Bombay is a small island, scarcely more than 7 miles in length, and very narrow, containing a very strong and capacious fortress, a large city, a dock-yard, and marine arsenal. It was ceded to the English in 1662, by the Portuguese, as part of the dower of the Queen of Charles II. On the N E it is separated by a narrow strait from Salsette, a fine island of about 15 miles square, and an acquisition from the Mahrattas in 1773. Bombay, Salsette, and the neighbouring shores of the Continent, form a large sound, in which are several other islands, particularly Caranjah and Elephanta; the

latter being famous for its subterraneous temple, and both of them acquisitions from the Mahrattas.

Salsette has also its subterraneous temples, cut out of the live rock: all of which appear to be monuments of a superstition anterior to that of the Hindoos.* On the east side of Salsette, and on the borders of the sound just mentioned, stands the fort of Tannah; probably on the site of the place of that name in the tables of Ulug Beig, &c. and on the opposite side of the sound, is the mouth of the river of Callian, or Gallian; the ruins of which are noticed by Fryer, and are probably those of the *Calliana* of the *Periplus Mar. Eryth.* (See Orme's Hist. Frag.)

Bafseen, a city and fortress of note, is situated on the point of the Continent opposite to the north end of Salsette. This place fell into the hands of the English, after a smart siege in 1780, but was restored to the Mahrattas, together with all the other conquests made on that side of India, at the peace of 1783. Salsette and the small islands excepted. Bafseen is situated in lat. $19^{\circ} 19'$, and under the same meridian as Bombay, as appears by the maps of that island and Salsette.

From Bafseen to Surat, the surveyor with General Goddard's army, drew a measured line (as I am informed), and the result gave 9.5 G. miles of easting, or $10'$ of longitude, for the difference between Bafseen and Surat; by which the latter should be in lon. $72^{\circ} 50'$. The difference of latitude N from Bafseen, was found to be $1^{\circ} 52'$, which, added to $19^{\circ} 19'$, gives $21^{\circ} 11'$ for that of Surat. It is placed in $21^{\circ} 10' 30''$.

It is a great misfortune to geography, that no one observation of longitude should have been taken on the west of Bombay: by which default, we are precluded from correcting an extent of 7 degrees of longitude, along a coast that winds in such a variety of

* At Elora near Dowlatshah, more than 200 miles to the east of Salsette, are other temples cut out of the rock. For an account of these, see Thévenot: and for the former, An. quinze du Perron.

directions, and whose geography is composed of materials of so miscellaneous a kind, that it can hardly be expected we should steer clear of error in the construction of it. The position of Surat is indeed checked by the measured line of General Goddard's march from Burhanpour; where Mr. Smith had an observation of the longitude. And we have also a measured line professedly taken with bearings on shore, as far as Amedabad. But compasses often differ; and the variation is as often neglected.

Mr. Smith's longitude of Burhanpour is $76^{\circ} 22'$ (but I have taken it in my map at $76^{\circ} 19'$, the reason of which I shall shew in its proper place), and it is taken notice of now, only with a view to shew how far Surat, as it is placed here, agrees with the observation made on the east of it.

By the survey of Goddard's march from Burhanpour to Surat, the difference of longitude between the two places appears to be $3^{\circ} 39' 45''$, which taken from $76^{\circ} 22'$, leaves $72^{\circ} 51' 15''$ for the longitude of Surat. I have before observed, that its longitude deduced from Bombay is $72^{\circ} 50'$; but having taken Burhanpour at $76^{\circ} 19'$, Surat will be in $72^{\circ} 48' 15''$, and that is the longitude I have adopted for it; altering at the same time Goddard's difference of longitude from Basseen to $8' 15''$, instead of $10'$. And as Mr. Howe's longitude of Bombay was altered from $72^{\circ} 38'$ to $72^{\circ} 40'$, it appears that Surat stands as it would do by Mr. Howe's original observation, and with Goddard's original difference of longitude.

The materials under different authorities, for the form of the coast between Basseen and Surat, do by no means accord together; nor have I the means of determining which to prefer. From Basseen to Arnaul, a fortified island commanding the entrance of the Angafsyah, or Mandavee river, I take from General Goddard's march, the only authority I can find. From Arnaul to Nonsary or Nolsary, a few miles short of Surat river, there is a chart by Lieut. Ringrose; and also a chart from St. John's Point, to Surat river, by Lieut. Skynner: by which means, we have about 50 miles

of the space contained in Skynner's chart, included also in Ringrose's; and an opportunity is given of comparing their bearings and distances, as well as Goddard's, which includes nearly the same space. Here, to our utter astonishment, we find two charts, professedly taken by authority, differ 11 degrees in bearing in an extent of 60 miles! for so much more eastwardly from the north, does Mr. Skynner make the bearing of Surat from Omergong, than Goddard's map does. As to the comparison between Ringrose and Skynner's charts, from St. John's Point to Nossary, Ringrose makes the bearing N 2° W, and Skynner N 10° E. Goddard's route coming close to the sea in the neighbourhood of St. John's, shews, if we may rely on his map, that the truth lay between Ringrose and Skynner; but that Ringrose came the nearest to it.

Having taken Goddard's line for the general bearing, I have adapted the other charts to it, in the best manner I could; preserving all their particulars, in which they do not differ so much as in generals. Such excellent surveying marks as Tarrapour and Valentine's Peaks, and Poneira Castle, &c. offer, might easily afford *data* for a series of triangles; and of course, for a general survey of this coast, in skilful hands: and take away from us the reproach of remaining ignorant of the true bearing between two of our principal factories, Bombay and Surat. St. John's Point does not appear to project far from the general line of the coast, either by Goddard's or Ringrose's accounts, though described in that manner in all former charts. The shallowness of the water near it, has probably kept navigators at too great a distance to be informed of the truth. I apprehend that the hill called Segwah, in General Goddard's route, is what is called Valentine's Peak by navigators.

From Surat to Ahmedabad, through the city of Broach, there is a route of General Goddard's, professed to be measured, and taken mathematically. We had previously maps or surveys of the country between Surat and the river Myhic, extending inland to Brodera, Dubhoi, and Zinnore, on the Nerbuddah; but none of them went

beyond the Myhie. The following is the comparison between the bearings and distances of the different maps as far as they go.

From Surat to Brodera, by Goddard N $18^{\circ} 55'$ E 69.95 G. miles.

Turner N $20^{\circ} 5'$ E 68.4

Himming N $18^{\circ} 28'$ E 68.85

Mean N $19^{\circ} 24'$ E 69.07

The differences here are not great, considering how much compasses and measures often differ among themselves. The mean of the 3 accounts differs so little, in any respect from Goddard's, that we need not hesitate to adopt the rest of his line to Amedabad, which is something more than 50 miles to the north-westward of Brodera. The most remarkable difference in this quarter, is between Mr. Skynner's and others' bearings and distances between Surat and Cambay.

Mr. Skynner's is - N $22^{\circ} W$ 83.2 G. miles.

Mr. Taylor's - N $9^{\circ} 5' W$ 67.7

Mr. Himming's - N $10^{\circ} 30' W$ 68.8

And it is remarkable that the deviation here, is from the north towards the west; on the former occasion, it was from the south towards the west. As Taylor's, Himming's, and Goddard's, agree so nearly between Surat and Brodera, one cannot help giving the preference to their lines, or at least to the mean of both, between Surat and Cambay; which last is placed in lat. $22^{\circ} 16' 45''$, and lon. $72^{\circ} 39' 45''$.

Having altered the bearing of the east side of the gulf of Cambay, it became necessary, in order to preserve a proper width to the gulf, to give the west side a direction more oblique to the meridian, than appears in the original. At the same time, as it appeared but reasonable that Groapnaught Point should preserve the parallel of lati-

tude assigned it in the original; the length of the western coast must necessarily be augmented, which it is, by 3 miles. The width of the gulf, in the original, from Swalley to Groapnaught, is $52\frac{1}{2}$ G. miles. I have allowed it $48\frac{1}{2}$ only.

It may be observed however that both D'Anville and D'Apres give even a more oblique direction to this coast than I have done; at the same time, that they give nearly the same direction to the eastern coast that Mr. Skynner does; and by this means, bring the head of the gulf almost to a point. D'Anville places Cambay $33'$ of longitude west of Bombay, and D'Apres $25'$. I have allowed only $7' 15''$. And Groapnaught Point, placed as above described, is in lon. $71^{\circ} 49' 30''$; which is $4' 30''$ more eastwardly than it would have been, had Mr. Skynner been followed throughout. It is unpleasant to reflect that one is left in a state of uncertainty on a matter of considerable importance; for such the true bearing of the opposite coasts of a deep and dangerous gulf must be regarded: and here we find a whole point in dispute.

From Groapnaught Point, to Diu Head, I have followed Mr. Skynner's original bearing and distance; which gives $1^{\circ} 50' 15''$ difference of longitude west; placing the westmost part of the Point in lon. $69^{\circ} 52' 15''$. The latitude is $20^{\circ} 43'$.

From Diu Point to Cape Monze, situated beyond the mouth of the western branch of the Indus, or Sinde river, the bearing and distance is taken from a mean of three charts furnished by Mr. Dalrymple, and with the distance, corrected by the latitudes of Point Diu, and Cape Monze, the latter taken at $24^{\circ} 45'$, gives $4^{\circ} 6'$ difference of longitude; placing Cape Monze in $65^{\circ} 46'$. M. D'Anville places this Cape near a degree more to the eastward; and makes the longitude between it and Bombay $4^{\circ} 57'$, instead of $6^{\circ} 52'$, as given in my map: and this makes a great alteration in the figure of the coast between Surat and the mouth of the Sinde, or Indus: the peninsula of Guzerat being much larger than was formerly supposed, the gulf of Sinde (or Cutch) much smaller;

and the delta of the Indus projecting into the sea, instead of receding from it.

The several charts of the western coast of the peninsula of Guzerat, and of the coast of Sinde, differ in a variety of particulars; and would make a minute discussion of them too tedious even for this Memoir; and besides, nothing appears in either of them to claim a preference. In the general bearing above given, the three charts differed no more, among themselves, than $2^{\circ} 15'$ in bearing; but the charts of the mouth of the Sinde and the gulf of Cutch, differed so much that Mr. Dalrymple thought proper to publish them all separately, in order that every person might be enabled to judge for himself. On collating the names of the different mouths of the Sinde, one finds great contradictions; and it is very difficult to identify them in the several charts. The flatness and want of variety in the appearance of the coast, added to the sand-banks which keep navigators at a distance, and prevent their discriminating any minute objects that may occur, occasion these mistakes. The tombs alone appear to be the marks for the coast. The latitude of Ritchel I have taken at $24^{\circ} 14'$; and that of Carranchy or Crotchey, at $24^{\circ} 52'$.

All the particulars of the western coast of Guzerat, and the mouth of the Sinde, are copied from the abovementioned MS. and printed charts of Mr. Dalrymple's: and consequently the whole coast from St. John's Point to Cape Monze, is described from new materials.

I now return to Balasore.

From Balasore, eastward to Chittigong, the distance has been determined by the inland survey; and the figure of the coasts and inlets by Capt. Ritchie's sea survey. The difference of longitude between the towns of Balasore and Chittigong (or Islamabad) is $4^{\circ} 55'$ east; and it is worthy of remark, that the distance by Capt. Ritchie's marine survey, agreed with the measurement on shore, to within two miles and a half.

The charts so late as the year 1752, represented the difference of longitude between these two places, to be only $9^{\circ} 48'$; that is, $1^{\circ} 5'$ less than the truth. And this diminution of the longitude, while the difference of latitude continued right, gave the sea coast between the mouths of the Ganges, a direction of two points, or $22\frac{1}{2}$ degrees more northwardly than the truth; which doubtless occasioned the loss of many ships, who trusted to the information.

From Islamabad, in longitude $91^{\circ} 55'$, latitude $22^{\circ} 20'$, the coasts of Aracan and Pegu take a S S E course to Cape Negrais, the extreme point of Pegu to the south-west; the latitude of which is under 16 degrees, and distance from Islamabad about 420 G. miles. The outline of this whole coast has been traced by Capt. Ritchie, under the same direction, and in the same manner, as the coasts on the west side of the bay. He made the difference of longitude $2^{\circ} 39'$ east from Islamabad; placing Cape Negrais in $94^{\circ} 27'$.^{*} Mr. Dalrymple, who has taken uncommon pains to ascertain the bearing of this coast from journals, and a variety of sketches and remarks, makes the difference of longitude $9^{\circ} 34'$, or only $2'$ different from Mr. Ritchie. The result of this laborious inquiry, corrected by a nicely-discriminating judgment, corroborates, in the strongest manner, Capt. Ritchie's calculation; and affords a degree of satisfaction next to that of an actual observation.

I mean to have it understood that Capt. Ritchie's chart of this coast, is to be taken only as a general outline, being imperfect as a coasting chart. Many particulars on this coast are taken from Mr. Dalrymple's collection, both printed and MS.: particularly, the river of Aracan, the east side of Cheduba, and the passage between it and the main; and a variety of particulars on the coast of Ava. Some of the names of places were also misconceived by Capt. Ritchie.

* The longitude of this Cape was reckoned by M. D'Anville only $93^{\circ} 16'$: so that the New Map increases the distance between the mouth of the Sinde (or Indus) and Cape Negrais, 2 degrees and 7 minutes of longitude.

Capt. Ritchie's latitude of Cape Negrais, or Pagoda Point, is more southwardly than it is commonly taken at, by 10 minutes; which I cannot account for, as his observations of latitude are generally exact. I have placed this Cape (by which I mean the south extremity of the coast of Ava) in $15^{\circ} 57'$, by the mean of 6 different accounts, varying from $15^{\circ} 51'$, to $16^{\circ} 4'$. Capt. Ritchie's was $15^{\circ} 52' 30''$.

At this point, my materials for ascertaining the intermediate longitudes of places on the eastern side of the bay, fail me: and I have been under the necessity, in a great measure, of substituting judgment for fact, between Cape Negrais and the next place of observation, Mergui: which place, as it is given by M. D'Apres in his new *Neptune Orientale*, is in $98^{\circ} 20'$ east longitude, or $3^{\circ} 58'$ east from Cape Negrais. M. D'Anville allows 4 degrees; which comes within 7 minutes of mine; but although we agree nearly in the aggregate, we differ widely in point of particulars.

The MS. charts that I have consulted, make the difference of longitude in question, $4^{\circ} 30'$ on a medium; which is $37'$ more than I make it. M. D'Apres makes it $4^{\circ} 19'$.

The disagreement in particulars between M. D'Anville's account and mine, arises in the part between Cape Negrais, and the coast of Martaban. It happens that this coast lies in a direction so far from meridional, and at the same time the tides and currents of the several mouths of the Ava river, do so disturb and falsify the ships' reckonings, that the true distance can never be ascertained that way in the ordinary course of navigation. Plans of the Persaim and Syrian rivers, as high up as the cities of those names respectively, have been already published in Mr. Dalrymple's collection; and, fortunately, I have been able to obtain tracings of the continuations of those rivers (which are the two extreme branches of the Ava river) to the place where they separate from the main river, at about 150 G. miles from the sea. The bearings of the two branches intersect each other at an angle of about 60 degrees; and, there-

fore, by the help of the latitude, may be used in correcting the length of the coast between Negrais and Syrian. The Persaim, or Negrais branch, was traced by that accurate observer, Capt. George Baker, in his way to Ava, in 1755. I have not been able to learn by whom the Syrian branch was traced; but by the orthography of the words in the map, the author appears to have been a Dutchman.

The result of these bearings, corrected by the latitude, as set forth in the Syrian map, gives difference of longitude from Negrais Point, to the mouth of the Syrian river, $2^{\circ} 21'$ east, which is about $10'$ less than M. D'Apres makes it, and $21'$ less than M. D'Anville. Some of the MS. charts make the difference still more.

The mouths of the Ava river, which form an assemblage of low islands, like those of the Ganges, are described from several MS. charts of Mr. Dalrymple's, collated with M. D'Apres' new chart.

From the mouth of the Syrian river to the coast of Martaban, in latitude 15° I have copied from the new chart of M. D'Apres, published a very short time before his death. The figure of the coast is quite new.

Between the aforesaid latitude and Tavai Point, our charts are very imperfect; but generally agree in giving the coast a direction of south, a very little eastwardly.

From Tavai Point to Mergui, the coast is taken from a MS. chart compiled by the late Mr. Howe.

Mergui is placed, as I have said before, according to M. D'Apres' observation: that is, in longitude $98^{\circ} 20'$; latitude $12^{\circ} 9'$.

All the remainder of the coast, to Junkselion; and the whole Mergui Archipelago, is from M. D'Apres.

I NEXT proceed to the chain of islands that extend from Cape Negrais to Sumatra; and are known by the names of the Preparis, Cocos, Andaman, and Nicobar Islands.

Capt. Ritchie, after leaving Negrais, proceeded agreeably to his instructions, to describe the situation and extent of the islands that compose this chain.

None of them are more than 84 G. miles distant from each other; so that he needed never to be more than 42 miles from land: and that but once during the voyage; that is to say, between the Little Andaman and the Nicobar Islands. In other places, the distance between the lands is commonly much less: so that the meridional direction of the course, and other circumstances, render this line of much use in correcting the longitudes, not only of the islands themselves, but of Sumatra also; and had it been continued, as was intended, to Acheen, would have answered the purpose completely.

Passing the Preparis and Cocos islands, Capt. Ritchie proceeded to Narcondam, to fix its position: then back again to Cocos; down the east side of the Great Andaman (which he found to be almost a degree of latitude longer than was before supposed), then up the west side of it, almost to the latitude of 12° : when finding the attempt to circumnavigate the island might prove fatal to the remainder of his work, he proceeded southward; describing the extent, figure, and positions of the Little Andaman and the Nicobars, till he came to the south point of the Great (or southmost) Nicobar. Here the wind suddenly changed to the south, and prevented him from determining the respective positions of the southern Nicobar and Acheen: which is the more mortifying, as one day's fair wind would have enabled him to accomplish it.

The result of this line of bearing is, that the south end of the Great Nicobar, is in longitude $94^{\circ} 23' 30''$; that is, only $3' 30''$ west from Cape Negrais.

The position of Acheen Head, or King's Point (the N W point of Sumatra), has hitherto been deduced from its bearing and distance from Malacca, the nearest place of observation; and its longitude according to this deduction, is $95^{\circ} 30'$ according to M. D'Apres. Now the bearing of Acheen from Malacca, being in a direction of more than 60 degrees from the meridian, and the distance 450 G. miles; little reliance could be placed on the result of it, if it did not happen that the respective positions of the southern Nicobar, and of Pouloo Ronde (an island near Acheen), the one deduced from Negrais Point, and the other from Malacca, agreed nearly with their reputed bearing and distance from each other. For, of two MS. charts which I have examined, the one makes $1^{\circ} 1'$, the other $1^{\circ} 2'$ difference of longitude between them; and these being laid down apparently without any attempt to support a system, may be supposed to be agreeable to experiment. The bearings and distances in these MS. charts are

In one - S 56° E — 72 G. miles.

And in the other S 56° E — 75

And according to the deduced longitudes abovementioned, the bearing and distance is S 56° E — 76

So that there cannot be any great error in the longitude of Acheen, as laid down in M. D'Apres' and in my map; if this sort of coincidence can be reckoned a proof of accuracy: a difference of a few miles, in the distance of 8 degrees, being much less than could be expected in such a series of deductions. M. D'Apres makes the bearing and distance between the south Nicobar and Pouloo Ronde S $57^{\circ} 30'$ E 97 G. miles; or difference of longitude $1^{\circ} 22'$, that is, $22'$ more than the MS. charts. It must be observed, that he reckons the south end of this Nicobar 9 miles farther to the north than the truth; occasioned by his making the island so much too little in extent: for the north end is in its true latitude. Had the south point of the island been in its true latitude, the bearing of Pouloo Ronde would have been more eastwardly, and the distance

only 93, instead of 97: and if, on the contrary, he has enlarged his distance on the original bearing, to make it answer to the latitude, the original distance could have been only 85 miles.

I have said before that Capt. Ritchie went no higher up the west side of the Great Andaman, than about the latitude of 12° . The remainder of that coast, as well as the passage through the islands at the north end of it, is from a MS. chart lent me by Mr. Dalrymple; and which carries with it the greatest appearance of truth, on a comparison of the south and south-west parts of the Great Andaman in this chart, with the same parts in the chart of Capt. Ritchie.

Barren Island, and the rock on the east of Duncan's Passage, are from the remarks of Capt. Justice in 1771.

ISLAND OF CEYLON.

It happens that the ordinary tracks of British ships, to and from Ceylon, and the coast of Coromandel, are not calculated for determining the relative positions of Point Pedro and Point Calymere, the approximating points of Ceylon and the continent of India. Hence it is, that we are so ill informed, not only of their true situations with respect to each other, but also with respect to the parallel of latitude under which Point Pedro is situated.

By my observations, Point Calymere (the southern extreme of Coromandel) lies in $10^{\circ} 20'$ latitude, and by inference from Madras, in longitude $79^{\circ} 54' 30''$. M. D'Apres places it 6 minutes more northwardly; and D'Anville 7 further south. The latitude of Point Pedro is also variously represented by the above geographers: I have taken it at $9^{\circ} 52'$.

In M. D'Apres I find the bearing and distance from Point Calymere to Point Pedro, to be - S. 37° E. 41 G. miles.

In D'Anville - - S. 39° E. 38

In a MS. chart, no name - S. $46^{\circ} 30'$ E. 40

I had an opportunity in 1764, of determining the position of Cow Island from Tondi, very nearly: I made it 10 G. miles west of Point Calymere, and 39 east of Tondi. Between Cow Island and Point Pedro, Van Keulen reckons $41\frac{1}{2}$, and D'Apres and D'Anville, 42 miles of easting. This will place Point Pedro $31\frac{1}{2}$ east of Point Calymere, or in longitude $80^{\circ} 27'$; and in bearing from Point Calymere E $43^{\circ} 20'$ S; $42\frac{1}{2}$ G. miles distant. I have placed it in this situation, accordingly; as thinking it not liable to any great objection.

The figure of the island of Ceylon is variously represented by different geographers. Van Keulen makes it too narrow in the swelling part; that is, between Batacola and Columbo; as is pretty evident from the longitudes shewn by the time-keepers of some of the commanders of the East-India ships, and others. D'Anville and D'Apres in their maps of the island, agree much better with these observations.

Between the meridians of Calitoor and the east side of Ceylon in lat. $7^{\circ} 40'$, Van Keulen reckons the difference of longitude only - - - - - $1^{\circ} 46'$

M. D'Anville - - - - - 2 1

M. D'Apres - - - - - 2 8

And by the time-keepers it is 2 19

However, until a regular series of observations by time-keepers is made by the same person, all round the island, we must despair of seeing the true figure of it, unless its coasts were surveyed. The casual observations which we are in possession of, from different hands, will only assist us in fixing certain points of it; which being done, the general figure of the island must at present be collected in the best manner it can be done, from the charts existing.

The following are the observations of longitude taken on the south side of Ceylon:

Point de Galle, by Capt. Huddart	-	80° 1' 30"
Dundas	-	80 7
West	- -	80 17†
The mean of these 3 accounts is	-	80 8 30

Dundrahead by Mr. Topping's observation (worked to Pondicherry in lon. 80°) is in lon. 80° 39': I reckon Point de Galle 98' west from Dundrahead, therefore it should be by this account in 80° 11'.

Mr. Topping observed the longitude of the Great Bassas also; so did Capt. Dundas: but as we are not well informed concerning the exact difference of meridians between them, and they being at least 1° 22' distant, nothing in these observations will apply to Point de Galle.

There is certainly too much discordance between the three longitudes of Point de Galle given above; the mean of which is 80° 8' 30". As Anjenga and Cape Comorin were placed 3' farther to the eastward than Capt. Huddart's observation warranted, in order to accommodate the differences between the two calculations, Point de Galle should be reckoned in 80° 11' 30". Mr. Dalrymple's time-keeper gave the difference of longitude between Anjenga and Point de Galle 3° 29' 30", which added to 76° 40' (see page 19) gives 80° 9' 30".

If we consider the respective positions of Point Pedro and Point de Galle by the different geographers, we shall have the following result:

* Deduced from Bombay, which is reckoned in 72° 40'.

† Capt. West reckoned from Sadrass, which I place in 80° 24'. He reckoned it 80° 19'; and of course, Point de Galle in 80° 22'.

Van Keulen places Point de Galle west of Point Pedro	- - - -	19' 45"
M. D'Apres	- - - -	10
M. D'Anville	- - - -	3
Mean of the three		8' 55" or 9'

And the longitude of Point Pedro being taken at $80^{\circ} 27'$, Point de Galle by this rule, will be in $80^{\circ} 18'$.

On an occasion like this, where we are not likely to come exactly at the truth, since no one can pretend to say whether the longitude of Point de Galle be $80^{\circ} 1' 30''$, or $80^{\circ} 18'$; I thought it better to insure a certain good, at the hazard of a small mistake, than to sacrifice that advantage, by adhering to a result which in itself was problematical. In other words, I judged it better to preserve the general form of the island, and consequently the respective positions of the north and south points of it, as given by D'Apres; and which appear to me to agree best with the result of the observations of longitude, taken on different sides of it; than to change those relative positions, which must have been done, had Capt. Huddart's observation at Point de Galle been adopted. I have therefore placed Point de Galle 10' west of Point Pedro (according to D'Apres); that is, in lon. $80^{\circ} 17'$. Had I adhered to the observations in respect of Cape Comorin, it would have been $80^{\circ} 11' 30''$. The mean of all the observations and deductions, is about $80^{\circ} 14' 30''$. The observations differ among themselves $14' 30''$. The latitude of this Point is 6 degrees; and of Dundrahead, the southmost point of the whole island, $5^{\circ} 51'$.

The observations at Dundrahead, were, by Mr. Topping, $80^{\circ} 39'$, and by Capt. Huddart $80^{\circ} 23'$. The Great Bafasas, by Mr. Topping $81^{\circ} 41'$; by Capt. Dundas $81^{\circ} 30'$. The variation in these longitudes, shew that a series of them by the same person, and the same time-keeper, is by much the most desirable.

The longitudes on the east side of Ceylon, by 3 different gentlemen; (viz.) Capt. Cumming, Capt. West, and Mr. Topping, do not disagree so much as those on the south side of the island. They are these:

		By construction.
In lat. $7^{\circ} 40'$	Mr. Topping's longitude was	$82^{\circ} 2' \quad 81^{\circ} 58'$
6 33	Capt. West's - - -	81 55 82
6 53	Capt. Cumming's - - -	82 82 2
7 31	Ditto - - - - -	82 1 82 1

Together with M. D'Apres' dimensions of the island (in the southern parts particularly), I have adopted his detail of the coast from Columbo to Vendelos Bay. From Vendelos Bay to Point Pedro, the coast in Van Keulen appears to be too nearly meridional, and his latitudes too much southwardly. Again, on the west side, from Columbo to Manar, I followed D'Apres' bearing, which is more north-eastwardly than Van Keulen's. Indeed it could not be otherwise, than that both the east and west coasts must have a greater degree of obliquity from the meridian, than Van Keulen represents: because he allows too little breadth to the south part of the island. In short, the general form of the island is D'Apres': but the particulars are collated with Van Keulen's and D'Anville's maps.

The distance from Mentole Point, on Ceylon, to Point Ramen on the continent, I take to be less, by $11\frac{1}{2}$ G. miles, than Major Stevens supposed it to be, in his chart; nor can it be otherwise, to reconcile it to my position of Cow Island.

The Maldivé and Laccadive Islands are copied from M. D'Apres; save that the position of the northmost Maldivé Island (called by the French *the bead of the Islands*) is placed according to Mr. Topping's observations of latitude and longitude in 1785. He made the latitude of it $7^{\circ} 5'$, and the lon. $73^{\circ} 4'$; and when opposite to it on the north, he counted 32 islands; the furthest bearing S E by E.

SECTION II.

The surveyed Tract on the Side of BENGAL, or that occupied by the Course of the GANGES, and its principal Branches, as far West as the City of AGRA.

THIS extensive tract, which comprises the soubahs of Bengal, Bahar, Allahabad, and Oude; a large portion of Agra and Delhi, and a small part of Orissa, is bounded on the east by Assam, and the dominions of Ava: on the south-east by the gulf, or bay of Bengal; on the south-west by an imaginary line drawn from the port of Balasore in Orissa, to the city of Narwah; on the west by another such line drawn from Narwah, through the city of Agra, to Hurdwar, the place where the Ganges first enters the plains of Hindooostan; and on the north, by the first ridge of mountains towards Bootan. It is in length from the city of Agra, to the eastern confines of Bengal, upwards of 900 British miles; and in breadth from 360 to 240.

With respect to the particulars of this survey, which was executed between the years 1763 and 1777, it is unnecessary to say more than that the distances were measured, and that they accorded with the observations of latitude and longitude; with the former minutely, and with the latter so nearly, that it was unnecessary to make any correction.

Agra, by Claud Boudier's observation,	is in	-	78° 29'
Calcutta, by the mean of four observations	-	88	28

Difference of longitude by observation	-	9	59
By survey	-	9	58

And Calpy on the river Jummah, stands in the survey in lon.	80° 4'
And by the Rev. Mr. Smith's observations	- - - 80 0

Agra, then, appears to be the most western point determined by the survey; and serves as a common point of union between the surveys on the east, and the routes furnished by various MS. maps, and itineraries, on the north, south, and west. By means of the survey also, a number of points are ascertained, which serve to set off cursory surveys of roads, both to the west and south: such as Hurdwar and Ramgaut, on the north of Agra; and Gohud, Calpy, Chatterpour, Rewan, Burwa, and Balasore on the south.

As this tract contains the site of the famous city of Palibothra (or Palimbothra), as well as those of Canoge (or Kinnoge), and Gour, it may not be amiss to take some notice of them: as also of some of lesser note, such as Punduah, Tanda, Satgong (or Satagong), and Sonergong: all of which (Palibothra excepted) are mentioned either in the Ayin Acbaree, or in Ferishta.

Pliny is the only one among the ancients (as far as I know) that assigns a particular spot for the site of Palibothra; the rest only speaking generally of its situation, and as it appears by a discussion of particulars, contradicting one another. All are agreed that it was situated on the right bank of the Ganges (that is, *intra Gangem*), and at the confluence of a large river with it. This river was named *Erranoboas* according to Arrian (who had his intelligence from Megasthenes's journal), and was of the third degree of magnitude among the Indian rivers; and inferior to none but the Ganges and Indus. I cannot apply the name Erranoboas to any particular river. Pliny certainly says that the *Jomanes* (Jummah) entered the Ganges by Palibothra, between *Melbora* and *Clisobara*;* but it is equally true, that in another place he mentions the conflux of the Ganges and Jomanes, and in the very next article says that Palibothra is situated 425 miles below *that very point of conflux*. Strabo does not give the name of the adjunct river.

Palibothra was the capital of the Prasii, by the account of Megasthenes, who resided there; and was of very great dimensions;

* The different readings are *Carytobora*, and *Cyrisoborca*.

being 80 stadia in length, and 15 broad. If we reckon these measures to produce 10 miles in length, and near 2 in width,* which for an European city, compactly built, would be reckoned enormous; yet it does not exceed the dimensions of some of the capital cities of the Indian soubahs or vice-royalties. The ruins of Gour in Bengal, are more extensive; that of ancient Delhi much more so. The plans of the Indian cities contain a vast proportion of gardens and reservoirs of water; and the houses of the common people consist of one floor only: of course, fewer people will be accommodated in the same compass of ground, in an Indian, than in an European city; and this may account for the enormous dimensions of Asiatic cities.

As Pliny's Indian itinerary (in Book VI.) enumerates the particulars of the whole distance between the Indus and the mouth of the Ganges; and particularizes the site of Palibothra; it could hardly be doubted that some very large city stood in the position assigned to it: but I had always a doubt of its being the capital of the Prasi † visited by Megasthenes. Late inquiries made on the spot, have, however, brought out this very interesting discovery, that a very large city, which anciently stood on or very near the site of Patna, was named Patelpoot'her (or Pataliputra, according to Sir William Jones), and that the river Soane, whose confluence with the Ganges is now at Moneah, 22 miles above Patna, once joined it under the walls of Patelpoot'her. This name agrees so nearly with Palibothra, and the intelligence altogether furnishes such positive kind of proof, that my former conjectures respecting Canoge must all fall to the ground: notwithstanding that Canoge was unquestionably the capital of a large kingdom from very early times.

I consider the above information as too clear and positive to require any proofs from ancient authors; and therefore the following

* The olympic stade can hardly be taken at a furlong, but probably at 200 yards. Then the dimensions will be about 9 8. miles in length, and 1 1 in width.

† The empire of the Prasi seems to have included most of the tract through which the Ganges flows, after it enters the plains of Hindooostan.

examination of Pliny's itinerary, is intended rather to shew his great accuracy in geographical subjects, than as a proof of the above position; although it may serve that purpose also. To use the words of a celebrated author, "Pliny's Natural History is one of the greatest monuments of universal knowledge, and unwearied application, now extant in the world."^{*} That part of the itinerary, applicable to my purpose, is as follows:

From Taxila or Tapila, on the Indus (probably near the site of Attock),† to the river Hydaspes (the modern Jhy- lum) - - - - -	120 Roman miles.
To the Hyphasis (Bryab) - - - - -	390
To the Hesudrus (probably the Setlege river) 168	
To the Jomanes (Jummab) - - - - -	168
To the Ganges - - - - -	112
To Rhodopa - - - - -	119
To Calinapaxa (a city) - - - - -	167
To the conflux‡ of the Jomanes (Jummali) and Ganges - - - - -	225
To Palibothra - - - - -	425
To the mouth of the Ganges - - - - -	638

It must first be observed of this itinerary, that it furnishes no means of comparing the *whole distance* between the Indus and the mouth of the Ganges, as shewn here, with that on the map; because the second article, namely, the distance from the Hydaspes to the Hyphasis, is obviously wrong, even if the text (which is very obscure) is to be taken at 390: for it cannot be more than 220 of Pliny's miles, unless the surveyor of Alexander's marches threw

* Blackwall.

† Taxila or Tapila, and the Indus, are mentioned as one and the same place by Pliny. *Ad flumen Indum et oppidum Taxilla.* Book VI.

‡ Here we may remark, by the way, that if any capital city had stood at the conflux of these rivers, it is likely that Pliny would have taken notice of it.

into the account, the circuitous route to the city of Sangala, &c. after the Catheri or Cathei. So that the account, as far as it regards the *whole* distance, is vitiated; and we must therefore have recourse to *parts*. Taking therefore for granted, that the Beyah river is meant by the Hyphasis (or rather Hypasis), as I hope to prove satisfactorily, in my observations on Alexander's march; and measuring on the map, along the line of the great road from the Panjab country to the mouth of the Ganges, the distance will be about 1140 G. miles: and as the itinerary in question gives the length of the same interval at 2022 Roman miles, the proportion of one of Pliny's miles to a geographic mile, will be as 56 to 100, in horizontal distance; or about $\frac{7}{10}$ of a British mile in road distance. This is certainly too short for the Roman miles of 1000 paces;* but the question in the present case, is not the actual distance, but the proportions of the intermediate parts of the road. The conflux of the Ganges and Jummah, on the map, is 990 of Pliny's miles from the Beyah, and 1032 above the mouth of the Ganges: and the itinerary makes the length of the first interval 959, the other 1063; that is, Pliny's account places the conflux too far down by 31 of his miles, or about 17 G. miles. Nor is this difference at all to be regarded in the general question: for our ideas of the distance were much wider of the truth 20 years ago.

Palibothra he places 425 miles, or so many parts in 1063, of the distance from the conflux of the Jummah to the mouth of the Ganges: and this is the point we are to attend to. Patna indeed, is only 345 of Pliny's miles below the present conflux; and this difference of 80 of Pliny's, or about 44 G. miles, however considerable it may appear to those who expect nice coincidences in such matters as these; does not, in my idea, lessen the general authority of the itinerary: because, if we admit only what it literally proved,

* M. D'Aville is of opinion that Pliny turned the Greek stades into miles, at the rate of 8 to 1 mile; and thus accounts for their shortness. M. D'Aville, who has gone deeply into the subject, thinks that it requires 1050 itinerary stades (of horizontal measure, I apprehend) to make a degree of a great circle. See his *Edificemens*, p. 55.

Palibothra must still have been situated within 44 miles of Patna. And as the people there have a tradition that Patna stands on, or near, the site of Patelpoot'her, it rather proves to me, either that there is an error crept into the copies of the itinerary; which notwithstanding, proves in general as much as is required; or that the point of conflux of the Jumnah with the Ganges, has undergone a change. For although the point of conflux is not found in the very position in which it ought to be by the itinerary, yet Patna is nearer to the position assigned to Palibothra. It may appear to some, a violent way of reconciling disagreements, but it is no new thing for the rivers of India to change their course and place of confluence. I have in the account of the Ganges, &c. (See Appendix) taken occasion to observe that the Cosa river changed its place of confluence with the Ganges, which is now 45 miles higher up than it was. The Burrampooter has varied its course still more. And to come nearer to the site of Patna, the change in the conflux of the Soane, just now remarked: for the ancient bed of that river is yet traceable on the south of Patna: and seems to have led into the Ganges near Furwa. It would be unnecessary to enter so far into a discussion of these differences, had not Pliny assured us that the distances were measured; and that by order of *Seleucus Nicator*.

We may observe that Arrian does not mention the name *Jomanes* in his book, although he does that of *Somus*. And if we had no other authority than that passage in Pliny, which expressly says that the Jomanes, a river which passes by *Methora* (probably *Matura*), runs into the Ganges by Palibothra, we must have supposed that this city was seated at the conflux of the two rivers. But the itinerary says that Palibothra was 4²5 miles below this conflux. Pliny must therefore have meant another river, different from the Jomanes.

Strabo gives the distance of Palibothra above the mouth of the Ganges at 6000 stadia; and though we cannot fix the exact length of the stade, we can collect enough to understand that 6000 stades

laid off from the mouth of the Ganges, would not reach far, if at all, beyond Patna.* Nor must we forget the passage of Arrian (in *Indicus*) in which Palibothra, the chief city of the Indians upon the Ganges, is said to lie *towards the mouths of that river*. But we ought not to omit, on the other hand, that Arrian quotes from Eratosthenes, the distance of Palibothra from the western extreme of India, which is said to be 10,000 stades, only: and that Ptolemy gives its latitude at 27° ; both which particulars apply better to Canoge than to Patna. It is possible that both places may have been occasionally used as capitals of the Prasii, as we have known both Agra and Delhi to have been of Hindoostan in general, during the two last centuries.

Pliny's Palibothra, however, is clearly Patna: and it is probable that Strabo meant the same place, by the distance from the mouth of the Ganges.

Canoge,† the ruins of which are at present of great extent, was, in an early part of the Christian era, the capital of Hindoostan; or rather of the principal kingdom along the Ganges. It is now reduced to the size of a middling town. It is situated on the right bank of the Ganges, near the place where the Calini river (or Callymuddi) joins it; and is possibly the place meant by Pliny for *Calimipara*. It is said to have been built more than 1000 years before our era: and is mentioned in Ferishta‡ as the capital of all Hindoostan, under the predecessor of Phoor, or Porus, who fought against Alexander. In point of extent and magnificence, Canoge answers perfectly to the description given of Palibothra; and in some respects to the local position given of it by Ptolemy and Eratosthenes, did not the above authorities assign it in a positive manner to Patna. The Indian histories are full of the accounts of its grandeur and populousness. In the sixth century it was said

* See page 52, where 1050 to a degree is the proportion fixed on by M. D'Anville.

† Latitude $27^{\circ} 3'$, longitude $80^{\circ} 13'$.

‡ Before Christ 326 years.

to contain 30,000 shops, in which betelnut was sold (which the Indians, almost universally, chew, as some Europeans do tobacco). In A. D. 1018, it was seized on by the Gaznian emperors: at which time, it gave its name to the kingdom, of which it was the capital.

Gour, called also Lucknouti, the ancient capital of Bengal, and supposed to be the *Gangia regia* of Ptolemy, stood on the left bank of the Ganges, about 25 miles below Rajemal.* It was the capital of Bengal 730 years before Christ,† and was repaired and beautified by Acbar,‡ who gave it the name of Jennuteabad; which name, a part of the circar in which it was situated, still bears. According to Ferishta's account, the unwholesomeness of its air occasioned it to be deserted soon after;§ and the seat of government was removed to Tanda, or Tanrah, a few miles higher up the river.

No part of the site of ancient Gour is nearer to the present bank of the Ganges, than four miles and a half; and some parts of it, which were originally washed by that river, are now 12 miles from it. However, a small stream that communicates with the Ganges, now runs by its west side, and is navigable during the rainy season. On the east side, and in some places within two miles, it has the Mahanada river; which is always navigable, and communicates also with the Ganges.

Taking the extent of the ruins of Gour at the most reasonable calculation, it is not less than 15 miles in length (extending along the old bank of the Ganges), and from 2 to 3 in breadth. Several villages stand on part of its site: the remainder is either covered with thick forests, the habitations of tygers and other beasts of prey; or become arable land, whose soil is chiefly composed of brick-dust. The principal ruins are a mosque lined with black marble, elaborately wrought; and two gates of the citadel, which are strikingly

* Latitude 24° 53', longitude 88° 14'.

† Dow 1st. 6.

‡ A. D. 1575.

§ This is Ferishta's account; but some of its present inhabitants told me that it was deserted in consequence of a pestilence.

grand and lofty. These fabrics and some few others, appear to owe their duration to the nature of their materials, which are less marketable, and more difficult to separate, than those of the ordinary brick buildings; which have been, and continue to be, an article of merchandise; and are transported to Moorshedabad, Mauldah, and other places, for the purpose of building. These bricks are of the most solid texture of any I ever saw; and have preserved the sharpness of their edges, and smoothness of their surfaces, through a series of ages. The situation of Gour was highly convenient for the capital of Bengal and Bahar, as united under one government; being nearly centrical with respect to the populous parts of those provinces, and near the junction of the principal rivers that compose that extraordinary inland navigation, for which those provinces are famed: and moreover, secured by the Ganges and other rivers, on the only quarter from which Bengal has any cause for apprehension.

Tandah, or Tanrah (called sometimes Chawaspour Tanda, from the original name of the district in which it was situated), was for a short time in the reign of Shere Shaw, in about 1540, the capital of Bengal, and became the established capital under Achar, in about 1580. It is situated very near to the site of Gour, on the road leading from it to Rajmal. There is little remaining of this place, save the rampart; nor do we know for certain when it was deserted. In 1659, it was the capital of Bengal, when that soubah was reduced under Aurungzebe: and Rajmal, Dacca, and Moorshedabad, appear to have successively become the capital, after Tanda.

Pundua, or Purruali, mentioned as a royal residence in Bengal, in the year 1353,* is about 7 miles to the north of Mauldah, and 10 from the nearest part of Gour. Many of its ruins yet remain; particularly the Addeenah mosque, and the pavement of a very long street, which lies in the line of the road leading from Mauldah to Dimagepour.

* Dow 1st. 340.

Satgong, or Satagong, now an inconsiderable village on a small creek of the Hoogly river, about 4 miles to the north-west of Hoogly, was, in 1566, and probably later, a large commercial city, in which the European traders had their factories in Bengal. At that time, Satgong river was capable of bearing small vessels; and I suspect, that its then course, after passing Satgong, was by way of Adaumpour, Ormpah, and Tamlook; and that the river called the Old Ganges, was a part of its course, and received that name, while the circumstance of the change was fresh in the memory of the people. The appearance of the country between Satgong and Tamlook, countenances such an opinion.

Sonergong, or Sunnergaum, was a large city, and the provincial capital of the eastern division of Bengal, before Dacca was built; but it is now dwindled to a village. It is situated on one of the branches of the Burrampooter, about 13 miles south-east from Dacca; and was famous for a manufacture of fine cotton cloths.

In some ancient maps, and books of travels, we meet with a city named *Bengalla*; but no traces of such a place now exist. It is described as being near the eastern mouth of the Ganges: and I conceive that the site of it has been carried away by the river: as in my remembrance a vast tract of land has disappeared thereabouts. Bengalla, appears to have been in existence during the early part of the last century.

It does not fall within the compass of my design to describe all the principal cities of Hindoostan, which alone would require a large volume; but it may not be amiss to point out their general positions, and the relation in which they stand to the several provinces or states, in which they are situated. Most of the capital cities are already described as they were in the last century, in the books of travels of Thevenot, Bernier, Tavernier, P. de la Valle, &c. which are in every body's hands. Most of these cities have, I believe, very considerably declined since that time; owing to the almost continual wars and revolutions that have taken place since

the death of Aurungzebe; and which were sufficient to desolate any country that did not produce almost spontaneously; and of course, where the deficiency of population is quickly replaced.

Within the tract discussed in the present section, the principal cities are, Calcutta, Moorshedabad, Patna, Dacca, Cossimbazar, Mauldah, and Hoogly, within the Bengal provinces: Benares, within the district of the same name, under the British sovereignty: and Lucknow, Fyzabad, Oude, Jionpour, Allahabad, Bereilly, and Corah, subject to the Nabob of Oude, our ally: and Agra, late in the possession of *Nudjuff Cawn*. Generally speaking, the description of one Indian city, is a description of all; they being all built on one plan, with exceeding narrow, confined, and crooked streets; with an incredible number of reservoirs and ponds, and a great many gardens, interspersed. A few of the streets are paved with brick. The houses are variously built; some of brick, others with mud, and a still greater proportion with bamboos and mats: and these different kinds of fabrics standing intermixed with each other, form a motley appearance: those of the latter kind are invariably of one story, and covered with thatch. Those of brick seldom exceed two floors, and have flat, terraced roofs. The two former classes far outnumber the last, which are often so thinly scattered, that fires, which often happen, do not, sometimes, meet with the obstruction of a brick house through a whole street.

Calcutta is, in part, an exception to this rule of building; for there, the quarter inhabited by the English, is composed entirely of brick buildings, many of which have more the appearance of palaces than of private houses: but the remainder of the city, and by much the greatest part, is built as I have described the cities in general to be. Within these 20 or 25 years, Calcutta has been wonderfully improved both in appearance, and in the salubrity of its air: for the streets have been properly drained, and the ponds filled up; thereby removing a vast surface of stagnant water, the exhalations from which, were particularly hurtful. Calcutta is well

known to be the emporium of Bengal, and the seat of the Governor General of India. It is a very extensive and populous city, being supposed at present to contain at least 500,000 inhabitants. Its local situation is not fortunate; for it has some extensive muddy lakes, and a vast forest, close to it. It is remarkable, that the English have been more inattentive than other European nations, to the natural advantages of situation, in their foreign settlements. Calcutta is situated on the western arm of the Ganges, at about 100 miles from the sea; and the river is navigable up to the town, for the largest ships that visit India. It is a modern city, having risen on the site of the village of Govindpour, about 90 years ago. It has a citadel, superior in every point, as it regards strength, and correctness of design, to any fortress in India: but on too extensive a scale to answer the useful purpose intended, that of holding a post in case of extremity; since the number of troops required for a proper garrison for it, could keep the field. It was begun immediately after the victory at Plassey, which insured to the British an unlimited influence in Bengal: and the intention of Lord Clive was to render it as permanent as possible, by securing a tenable post at all times. Clive, however, had no foresight of the vast expence attending it, which perhaps may have been equal to two millions sterling.

Hoogly is a small, but ancient, city, on the same river as Calcutta, though on the opposite side; and about 26 miles above it. In the time of the Mohainedan government, it was the *bunder* or port of the western arm of the Ganges; where the customs or duties on merchandise, were collected. The French, Dutch, Danes, and Portuguese, have each of them a town and factory on this part of the river, between Hoogly and Calcutta; and all within the extent of 10 miles along the river. The French settlement of Chandernagore, and the Dutch one of Chinsura, are both very neat and pretty large towns; and each of them on a better site than Calcutta.

Moorshedabad, situated also on the western arm of the Ganges, which is there very low in the dry season, is about 120 miles above Calcutta. It was the capital of the Bengal provinces, until the establishment of the British power: and even long after, it was the seat of the Collector General of the revenues; being a more central situation than Calcutta. It is very large, but ill built; and in its plan so very irregular, that it is difficult to estimate the quantity of ground it stands on. It is a modern city, and does not contain any magnificent buildings, either public or private: nor was it ever fortified, except by an occasional rampart thrown up round it, on the Mahratta invasion in 1742.* This city is now decaying, especially since the removal of the Board of Revenue to Calcutta, in 1771.

Cossimbazar is a small city, nearly adjacent to Moorshedabad, and was at all times the place of residence of the different European factors; this being the centre of their trade.

Mauldah is a pretty, neat, city, not far removed from the north bank of the Ganges; and on a river that communicates with it. It arose out of the ruins of Gour, which are in its neighbourhood. In point of general situation, it is about 70 miles to the north of Moorshedabad. This, as well as Cossimbazar, is a place of trade, and in particular produces much silk.

Rajemal lies on the west bank of the Ganges nearly in the parallel of Mauldah, and about 20 miles from it; at the foot of the chain of hills which projects into the river at Siclygully and Terriagully. It is in a ruinous state, although the residence of the viceroy not 130 years ago; and has hardly the population of an ordinary market town at present. Its situation is romantic, but not pleasant: for in Hindoostan, the hills and eminences being always covered with wood, that beautiful swelling of the ground, which is so justly admired in European landscapes, is lost; and the fancy is

* See Introduction.

presented at best with nothing beyond a wild scene; which can only be relished by being contrasted with soft and beautiful ones. M. D'Anville considered Rajemal as being seated at the head of the delta of the Ganges: but it is more than 30 miles above it.

Dacca is situated in the eastern quarter of Bengal, and beyond the principal stream of the Ganges, although a very capital branch of the same river runs under it. Few situations are better calculated for an inland emporium of trade than this; as the Dacca river communicates with all the other inland navigations; and that not by a circuitous, but by a direct communication: as may be seen by the plan of its environs, in the Bengal Atlas. It succeeded Sonergong, as the provincial capital of this quarter; and is the third city of Bengal, in point of extent and population. It has a vast trade in muslins; and manufactures the most delicate ones, among those that are so much sought after in Europe: and the cotton is produced within the province. Dacca has in its turn been the capital of Bengal: and that within the present century. There are the remains of a very strong fortress in it; and within these few years there was near it, a cannon of extraordinary weight and dimensions:^{*} but it has since fallen into the river, together with the bank on which it rested.

Dacca is situated about 100 miles above the mouth of the Ganges, and 180 by the road from Calcutta. The country round it lying low, and being always covered with verdure during the dry months,

* As it may gratify the curiosity of some of my readers, I have here inserted the dimensions and weight of this gun. I took the measures very carefully throughout, and calculated each part separately. It was made of hammered iron; it being an immense tube formed of 14 bars, with rings of 2 or 3 inches wide driven over them, and hammered down into a smooth surface; so that its appearance was equal to that of the best executed piece of brass ordnance, although its proportions were faulty.

Whole length	-	-	22 feet 10 $\frac{1}{2}$ inches.
Diameter at the breech	-	3	3
— 4 feet from the muzzle	-	2	10
— the muzzle	-	2	2 $\frac{1}{2}$
— of the bore	-	1	3 $\frac{1}{2}$

The gun contained 234.413 cubic inches of wrought iron: and consequently weighed 64.814 pounds avoirdupoise; or about the weight of eleven 32 pounders. Weight of an iron shot for the gun 465 pounds.

it is not subject to such violent heats as Moorshedabad, Patna, and other places.

Patna is the chief city of Bahar, and is a very extensive and populous city, built along the southern bank of the Ganges, about 400 miles from Calcutta, and 500 from the mouth of the river. Having been often the seat of war, it is fortified in the Indian manner with a wall and a small citadel. It is a place of very considerable trade. Most of the saltpetre imported by the East-India Company, is manufactured within the province of Bahar. It is a very ancient city; and probably its modern name may be derived from Pataliputra, or Patelpoot'her; which we have supposed above to be the ancient Palibothra.

Benares is the chief city of the district commonly known by that name (and which consists of the circars of Benares, Jionpour, Chunar, and Gazypour), but is more celebrated as the ancient seat of Braminical learning, than on any other account; although it be a fine city, in itself very rich and populous, and the most compactly built of any. It is built along the north bank of the Ganges, and is distant from Calcutta, by the road, about 460 miles. Its ancient name was Kasi: but there are no notices concerning it in the works of the ancient geographers. I think, if it had existed during the time of the Syrian ambafadors, Pliny would have noticed it, as he has done Methora (Matura) and Clisobara, which lay near the Jummah river.

Allahabad is seated at the point of confluence of the two great rivers Ganges and Jummah, and succeeded to Pryaug, or Praig. Acbar founded the present city, which he intended as a place of arms; as its situation is very important, both as it respects the navigation of the two rivers, and the country of the Doab behind it. Allahabad is about 820 miles above the mouth of the Ganges, and 550 by land from Calcutta. It belongs to the Nabob of Oude; but its fortifications will hardly resist the battering of a field piece.

Lucknow is the present capital of Oude, having superseded the late capital Fyzabad, on the occasion of the Rohilla and other conquests; which left it rather in a corner of the kingdom, as it is now constituted, and in that corner the farthest removed from the scene of business. It is a very ancient city, and moderately extensive: but after the short account given above of the nature of the ordinary buildings, a city may very suddenly be augmented, on its becoming a royal residence: and Fyzabad of course may have declined. A small river, named the Goomty, runs under Lucknow, and communicates with the Ganges; but this last river is at least 43 miles to the SW of Lucknow. With respect to Calcutta, it is distant by the nearest road, 650 miles; and about 280 from Delhi. All is one vast plain from Lucknow to the mouth of the Ganges.

Fyzabad lies on the river Gogra, a very large river from Thibet; and is situated about 80 miles to the eastward of Lucknow, 560 from Calcutta. It is a very large city: and nearly adjoining to it, is the + very ancient city of Oude or Ajudiah. Fyzabad, as we have just seen, was the capital of the Nabob of Oude, till within these few years; but it was an inconvenient situation, even before the Rohilla conquest.

Jionpour is a small city on the Goomty river, about 40 miles to the NW of Benares, and in the road from that city to Fyzabad.

Corah, or Corah-Jehenabad, is a small city in the Doab, or country between the two rivers Ganges and Jumnah, subject to the Nabob of Oude.

Bereilly is the capital of Rohilkund, which was added to the dominions of Oude, in the year 1774. It is but a small city, and is situated about half way between Lucknow and Delhi.

The city of Agra,* as I have said before, is situated at the western extremity of the tract under discussion; and on the south bank of the Jumnah river, which is very seldom fordable. This

* Latitude $27^{\circ} 15'$, longitude $78^{\circ} 29'$ by Claud Boudier; $78^{\circ} 28'$ in the map.

city appears to have been, during the late century, and in the beginning of the present, the most splendid of all the Indian cities; and at this time exhibits the most magnificent ruins. About the year 1566, the Emperor Acbar, liking its situation, made it his capital; since which, it is often named Acbarabad. It was then a small fortified town; but it soon became an extensive well built city, regularly fortified according to the Indian method, and with a fine citadel of red free-stone. Perhaps it has seldom happened, that a city of such great extent and magnificence has declined so rapidly. If Ptolemy, by Agara, meant Agra, it is certainly a place of great antiquity; but he has not placed Agara in the situation where we should look for Agra: and I rather suppose that *Agaraoa* was the place meant.* Biana or Baniana seems to have immediately preceded it, as the capital of the province now called Agra, and which was originally included in the kingdom of Canoge.

* Bernoulli, Vol. I. p. 133.

SECTION III.

The Tract occupied by the Course of the River INDUS and its principal Branches: with the adjacent Countries on both Sides, from the Mountains of CABUL and CASHGAR, to the Cities of AGRA and AGIMERE.

THIS part comprehends in general the soubahs or provinces of Cabul, Cashmere, Lahore, Moultan, and Sindy; with the northern parts of Agimere; and the western parts of Agra and Delhi: and is about 750 B. miles in length from N E to S W ; and from 750 to 350 in width. It is bounded on the east by mount Sewalic, and by an imaginary line drawn from Hurdwar to Agra; on the south by the great road leading from Agra to Agimere, and by the river Puddar; on the west by the Arabian sea, and Persia; and on the north by Balk, Badakshan, and Cashgar. But as the original map of Hindooostan is not extended so far to the N and NW as these limits imply; and as much valuable information concerning this tract, has been communicated since the publication of the first edition of this work; an appendage to the original map, on a similar scale, is here given. To this the reader is referred for an explanation of what belongs generally to Hindooostan, in this Section; as well as to another, on a smaller scale, for its connexion with Persia and Tartary.

Delhi, the nominal capital of Hindooostan at present, and the actual capital during the greatest part of the time since the Mahomedan conquest, has its position determined by observations of latitude and longitude; which observations accord both with the maps, and with the popular estimation of its distance, from the nearest points in the surveyed tract, mentioned in the last Section.

We first hear of Delhi, as the capital of Hindoostan, about the year 1200. It is reported to have been founded by Delu,* about 300 years before our æra; and I believe should properly be written *Deby*. Although a more extensive and populous city than Agra, it was not so well built. Shah Jehan, grandson of Acbar, and father of Aurungzebe, made this city his residence, and directed it to be called Shahjehanabad; and by this kind of vanity, it happens, that most of the Indian cities have a plurality of names: a practice very common in Hindoostan; to the utter confusion of historic records, and no less injustice to the original founders.

It is difficult to ascertain the true measure of extent of this city, which was said to contain, during the latter part of the last century, two millions of inhabitants. It is certain, that the account given by Bernier, who had good opportunities of being well informed, and who deserves the greatest credit for veracity, does not justify so high a calculation of its inhabitants. His account was indeed written in 1663, only four years after the accession of Aurungzebe; and it is well known that under his reign, both the empire and capital were greatly augmented. Bernier, I say, estimated the circumference of Delhi at three leagues only, reckoning what was within the fortifications; besides which, he describes several suburbs, but altogether, no extraordinary extent for a capital city in India. He describes Agra as being considerably larger. After the plunders and massacres that it has been subject to, since the decline and downfall of the Mogul empire, we may expect it to be reduced very low: and accordingly, it is spoken of by late travellers as a city of moderate extent; and even for an Indian city, very ill built.

Claud Boudier found the latitude of Delhi to be $28^{\circ} 37'$; and its longitude $77^{\circ} 40'$. A MS. map communicated by my friend Mr. Hastings, and which includes some principal roads in the Dooab,

* Ferishta. The Ayn Acbaree says that the ancient name of Delhi, was Inderput.

between Furruckabad, Matura, Anopesheer, and Delhi; gives 51 G. miles of westing from Anopesheer, the nearest point in the Bengal survey, to Delhi; and 16 of northing: and this agrees perfectly with the observation of longitude, and comes within one minute of the latitude. Delhi is also 40 computed coses from Ramingut, another point in the survey: but this would place it four miles further to the east than the observation gives. It is placed according to the result of the observation, and the distance from Anopesheer.

Beyond Delhi, westwards, there are no points determined mathematically, by which the length and direction of the routes can be ascertained with such exactness as on the east of this point: but we are left to rely either on the reports of computed distances; or of measured ones, where, for want of a knowledge of their inflexions, we can only approximate the quantity of the direct distance, by the application of a general rule, or canon. To the list of *data*, however, must be added the latitudes and longitudes of the tables of NASEREDDIN and ULUG BEIG; which although perfectly satisfactory, as they respect the whole interval between Syria and India, do not always agree in particulars. But we shall find them accord with the geographical construction, in a sufficient number of points, to satisfy the reader that there is no violent disagreement in the chain of positions.

Sirhind is the first capital point, beyond Delhi, that I have any good authority for placing. In point of general situation, it is about midway between Delhi and Lahore. By the favour of my friend Col. Polier, I am possessed of a map of the countries situated between the upper part of the course of the Ganges, and the rivers of Panjab; and between the northern hills, and the road leading from Delhi to Bathir. This map was constructed by an European gentleman, whose name I am unacquainted with: but Col. Polier assures me that the routes between Delhi and Sirhind were drawn from the gentleman's own observations on the spot: and this part

is particularly distinguished from the rest, which were drawn on the authority of others: but which are, notwithstanding, the best of their kind, as far as I have had an opportunity of checking them. The scale is in coises, of which the author allows 69,³* between Agra and Delhi; which interval, on the authority of Capt. Reynolds, I have taken at 98,³ G. miles of direct distance; and by this proportion, the coises of the map are to be reckoned at 42,³ to a degree. (See page 5.)

In the map, the bearing of Sirhind from Delhi, is N $33^{\circ} 15'$ W; the distance 105[†] of the abovementioned coises: by which Sirhind falls in lat. $30^{\circ} 41' 30''$; lon. $1^{\circ} 34'$ W from Delhi; or from Greenwich, $76^{\circ} 6'$. Its latitude is unluckily omitted in the printed copies of the Ayin Acbaree; but as a presumptive proof of the truth of its parallel, Shahabad, in the province of Sirhind, falls by construction in $30^{\circ} 13'$; and Thanasair (or Tannasar) in 30° ; which are given at $30^{\circ} 12'$, and $30^{\circ} 10'$, respectively, in the Ayin Acbaree. And what, moreover, I consider as an irrefragable proof of the general accuracy of the position, is, that Mustaphabad, which stands in Col. Polier's map at 42 coises from Sirhind, towards Hurdwar, is by Bernoulli's account (Vol. I. p. 146, 147) 46 coises from Hurdwar: by which the interval between Sirhind and Hurdwar should be 88 coises: and it is actually so by the construction.

Sirhind is a very ancient city: but like most of the Indian cities, has greatly declined. Between it and Delhi, are extensive plains, within which are situated the towns of Panniput, and Carnawl, famous for great battles, both in ancient and modern times.[‡] The reason of it is, obviously, the nature of the country; a vast plain,

* Thevenot says that there are 69 or 70 turrets (i. e. mile-stones) between the two places: and indeed, the distance is ordinarily reckoned 70, to 71 coises. Lieut. William Stewart, a gentleman of considerable merit, and whose ingenuity, perseverance, and zeal, are likely to promote the interests of geography, measured the road distance, and found it to be $137\frac{1}{2}$ statute miles between Agra and Delhi. If 71 coises were reckoned on the same road, each common coise would be 1.94 B. miles, of road distance.

[†] The computations vary from 99 to 105 coises.

[‡] Near to Tannasar and the lake Koorkhat, places of Hindoo worship, is the scene of the

situated at the mouth of a pass: for such the country immediately on the west of Delhi may be considered to be, shut up by the mountainous and close country of Mewat and Agimere on the one hand, and by the Jumnah river on the other: and whether Delhi, Agra, or Canoge, was the capital, this was the road to it from Tartary and Persia, the original countries of the conquerors of Hindoostan.

The course of the Jumnah river, above Delhi, to the neighbourhood of the hills, is determined by Col. Polier's map; as are most of the positions in that part of the Dooab:^{*} and they accord generally with the notices in Bernoulli. The site of the very ancient city of Husteenapour, is, by this map, and by the report of M. Bernoulli, near the western bank of the Ganges, 38 G. miles below Hurdwar, and on the north-east of Delhi. The Dooab appears to grow much narrower as it approaches the hills. Capt. Kirkpatrick informs us, that the province of Doon, or Down, occupies the space at the foot of the mountains that extend from the Ganges to the Jumnah; and that its length is only 20 coses; that is, royal coses of $2\frac{3}{4}$ B. miles, and upwards. Mr. Forster's route lay within the mountains, and his report corresponds nearly with this; so that 40 or 41 G. miles, in direct distance, is the utmost that can be allowed for the breadth of the Dooab, in this place: and it being so much wider below, the course of the Jumnah within the mountains must be from NE to SW: and it is indeed highly probable, that it should run nearly at right angles with the line of direction of the mountains, as they rise above one another in a series of ridges; of which the highest appears to be the snowy one, lying behind Sirinagur. If the Jumnah springs from the south side of this ridge, its course would be limited to about 90 miles, from its source to its entry on the plains. It

war of the MAHABALIUT (an episode of which has been lately translated from the original Sanscrit, by Mr. Wilkins), so that this ground, which is not far from Carnali and Panniput, has been the scene of war in all ages; poetically, as well as historically.

* See an explanation of the term Dooab, in the Introduction, page cxvi.

is singular that no notice should be taken of the place of its source, in the Ayin Achbaree; when those of the rivers of the Panjab are so particularly described. But the Panjab rivers all spring from the south-west of the snowy ridge: and may we not conclude from this silence, and from the bulk of the Jumnah where Mr. Forster crossed it (for he found it as wide as the Ganges, within the hills; and this he states to be 200 yards), that it really has a more distant source; for the Setlege at Bullauspour was only half the width of the Jumnah?

Between Carnawal and Sirhind, four streams, or rivers, cross the great road. Two of them are the Caggar (or Kenker), and the Sursooty (or Sereswatty), and the others have no names in the MS. maps. The first is taken notice of in the Ayin Achbaree, as one of the lesser streams in the soubah of Delhi; and as passing on the west of Tannasar, a celebrated place of Hindoo worship. The second passes between Umballa and Sirhind; and the rest between the two first-mentioned ones. It is probable, from circumstances, that there may be others, although deemed too insignificant to merit notice. All these streams run to the south, or south-west; and probably mix either with the Indus, or Puddar; though I formerly supposed them to run to the S E into the Jumnah. I had also, with M. D'Anville, supposed the Caggar to be the *Hesudrus* of Pliny; situated half way between the *Hyphasis* and *Jomanes*: but having now discovered the Beyali to be the river meant by the ancient Hyphasis, there can be no difficulty in pronouncing the Setlege, or Suttuluz, to be the Hesudrus; as it answers in point of proportional distance.

It appears from Ferishta (Dowe I. 329), that on the west of Sirhind, a small rivulet named *Selima*, ran to the south, towards Sunnam, or Soonam (a well-known place, about 60 miles to the SW of Sirhind); possibly this may be the same with the *Jidger*, often mentioned by Ferishta; and which may be referred to this quarter. And as Ferishta drew a canal from the *Setlege* to the *Jidger*,

one might expect those rivers to lie next each other, of course. What farther strengthens this opinion, in my mind, is, that Ferose is said to have turned a larger rivulet, that originally ran into the Setlege, into a smaller one (the Selima) that ran towards Sunnam (Dowe I. 329). I should almost conclude, that the canal from the Setlege, led into these confluent waters. Before we proceed finally to attempt the description of the courses of the famous canals of Ferose, it will be necessary to fix, as geographical points, the places near to which the canals are supposed to pass.

Samanah, or Semana, a town of some note, is placed on the authority of Col. Polier's map, about S by W $40\frac{1}{2}$ G. miles from Sirhind. Samanah is of considerable importance to the geographical construction; it being the first point that can be recognized in the march of Tamerlane's army, after that conqueror left Batmir. Sherefeddin reckons it 52 coses from Paniput; and in Col. Polier's map it is about 50. It is situated in the circar of Sirhind; and is bordered on the south by Hissar, which has for its capital Hissar Ferozeh, celebrated on occasion of its being founded by Sultan Ferose III. as well as for its canals: for the country between Delhi and the Panjab, being scantily supplied with water, the Emperor Ferose III. undertook the noble as well as useful task of supplying it better; and at the same time meant to apply the water so furnished to the purposes of navigation. Capt. Kirkpatrick's friendly and well-directed attention has enabled me to give a general idea of Ferose's plan: although certain parts of it are yet obscure, for want of knowing how to apply the names of the rivers, and water courses, mentioned in Ferishta.

The position of Hissar Ferozeh, is clearly to be collected from Capt. Kirkpatrick's MSS. assisted by Col. Polier's, and Bernoulli's notices. According to Bernoulli, Hissar is 60 coses to the westward of Delhi: and it is also 40 from Sarsa, E S E, according to Kirkpatrick. Sarsa appears also in Polier's map, at 98 coses from Delhi; which will be found to agree, considering that Hissar

lies out of the direct line. Kirkpatrick also makes it to be 80 common coses from the outlet of the canal, that leads from the Jummah, by Sufedoон, to Hissar; and Sufedoون being 90 royal coses from that outlet, the complement, equal to 54 G. miles, should be the distance of Hissar from Sufedoون. And this last place is marked in Polier's map, at 20 G. miles W. by S from Panniput.

Hansi, a town whose proximity to Hissar, has occasioned the latter to be often named *Hansi-Hissar*, lies on the canal from the Jummah, at 10 coses from Hissar, to the N E. This place is also 18 from Mahim; 30 from Dadari; both which places appear in Col. Polier's map. And Hansi, thus placed, adds confirmation to the position of Hissar: for according to a map communicated by Col. Murray, Hansi ought to stand 8 or 9 coses S W of Jind, or Juneed; and this is the position that Hansi actually takes in Col. Polier's map, when placed as above, in respect to Mahim and Dadari.

Again, Capt. Kirkpatrick gives the distance of Hansi from Bahadernagur ($11\frac{1}{2}$ coses W of Delhi), circuitously through Rohruk and Mahim, at $46\frac{1}{2}$ coses; or at $57\frac{1}{2}$ from Delhi. And these places being also in Col. Polier's map, we are enabled to ascertain the direct distance, by allowing for the inflexions of the road, by its passing through those places,

Hissar being thus satisfactorily placed, I proceed to the account of it, and of its canals. The site of this city and fortress was originally occupied by two villages, named Great and Little Luddas; they stood in the midst of a sandy desert, and were so ill supplied with water, that it was sold to the travellers who passed this way from Persia to Delhi. It was to remedy this defect in the city which Feroze proposed to build here, that he caused canals to be drawn to it, as we have seen above. The city and fortrefs were built of stone, brought from the neighbouring hills of Nosa, or Loosa; and they were completed in two years and a half; all the omrahs assisting in the work.

It appears, that previous to the building of Hissar, Feroze had made a canal from the Jumnah, near the northern hills, to Sufedoon, a royal hunting place; for the purpose of supplying it with water. Sufedoon is about 20 G. miles to the westward, or W by S, of Panniput. This canal was in length 30 royal cosses, or full 60 G. miles; and it passed by Carnawl and Toghlukpour. After the foundations of Hissar were laid, he drew two principal canals to it; one of which was a prolongation of the canal of Sufedoon, the whole extent of which was then 80 (common) cosses, or about 114 G. miles. Perhaps it may be proper in this place to mention, that Shah Jehan, about the year 1626, not only repaired and cleansed that part of the canal between the hills and Sufedoon, but prolonged it, by a new cut, to Delhi; an additional length of full 60 G. miles; and this prolongation obtained the name of *Nebr Bebisbt*, or the canal of *Paradise*.

The other principal canal, was drawn from the Setlege river, to Hissar Feroseabad. The outlet and course of this canal is not so clearly defined as the other: Capt. Kirkpatrick, to whom I am indebted for the information concerning Hissar and its canals, had it from a history of Feroze, written by *Shumse Seraje*, soon after the death of that great monarch, which happened in 1388. Shumse Suraje says, that the canal was made from the mouth of the *Setlege*: which Capt. Kirkpatrick concludes to mean the confluence of that river with the Beyah: for, after the meeting of those rivers at Ferosepour, the name of Setlege is no more heard of (above Moultan at least), that of *Kerab* being the name of the confluent waters. And this would seem to be corroborated by Ferishta, who says, that in the year 1355, Feroze went to Debalpour, where he made a canal of 100 miles in length, from the *Setlege* to the *Jidger* (Dowe, vol. I. p. 327). Concerning the identity of the Jidger, I have before expressed an opinion (page 70): conceiving it to be a stream that ran by Sirhind and Soonam. What follows in Ferishta, as translated by Dowe, I confess I do not well com-

prehend. "He [Feroze] drew soon after, a canal from the Caggar, passing by the walls of Sirsutti, and joined it to the river of Kera; upon which he built a city, named after him Feroseabad. " This city he watered with another canal from the Jummah. " These public works were of prodigious advantage to the adjacent countries, by supplying them with water for their lands, " and with a commodious water-carriage from place to place." It may, possibly, be a jumble of two sentences, which related to different cities, together: the river *Kera*, and *Feroseabad*, may relate to the city of Ferosepour, at the conflux of the Setlege and Beyah: and the canal from the Jummah, to Feroseabad, a city founded by Feroze, in the vicinity of old Delhi. Capt. Kirkpatrick remarks an obscurity in the text of Ferishta in this place.

I confess I have a different idea of the course of the western canal, from that derived from the words of Shumse Suraje; and should suppose the outlet of it, from the Setlege, was nearer to Ludhana than to Ferosepour; because, 1st. Considering the course of the Setlege, the level of the country between it and the Caggar, or the Jidger, would be against a canal cut from Ferosepour; especially when the waters were low. 2d. I am informed by Col. Polier, that the lands between the Setlege and Batnir lie very high, in the nature of an elevated plain; so that water is only to be had from exceeding deep wells: the nature of such a country is consequently against a canal on a level section. And, 3d. The rivers Setlege and Caggar diverge in their courses to such a degree, that the extent of a canal, in the lower part, would be almost double the length required.

But although the precise geography of these canals may not be understood, we can be under no difficulty concerning the general scope of Feroze's design; which was to distribute water through a large extent of dry, sterile country, with a view to fertilize it; and also for the purposes of water carriage. That he in a great degree, accomplished the *former*, appears by the account of Shumse

Suraje; the substance of which is communicated by Capt. Kirkpatrick :* but concerning the *latter*, we have no other information than that contained in the above quotation from Ferishta. Neither the breadth, or the depth of the large canals, are mentioned by either historian. That which conducted the water from the hills to Sufedoona, is said to be about four yards in breadth.

Whether this grand design of Feroze's was completely executed, I have no means of knowing. Probably, as we have heard so little of the western canal, it might never have been rendered adequate to the purposes of navigation. Had it been completed, it must have ranked with the greatest works of this kind: we should then have seen two capital rivers, which traverse a large part of southern Asia, which enter the sea at the distance of 1500 British miles asunder, and which stretch out their arms, as it were, to meet each other, united by art; and those, by nature, to a third; so as to form an uninterrupted inland navigation from the frontiers of China to those of Persia!

The distance between the navigable parts of the Jummah and Setlege, is about 105 G. miles, in a direct line: but according to Feroze's plan, it might be 240. It appears that one of the branches of the eastern canal led into the Jummah at Kungipara.

The length of this dissertation on the canals of Feroze, may possibly appear tedious to many; but improvements of this kind occur so seldom in the history of Hindooostan, where barbarous conquests and massacres are oftentimes the principal subject, that they are dwelt on with pleasure whenever they appear: and we

* Besides the main canals that have been mentioned, it seems that several others were cut, which united them in different parts, and in different directions. The banks, both of the main canals and their branches, were covered with towns: such as Juned (the Jind of Pother's map), Dhataret, Haasi, and Toghlukpour. Feroze, by sanction of a decree of the cuzzees, assembled for the purpose, levied a tenth of the produce of the lands fertilized by these canals; which he applied, together with the revenue yielded by the lands newly brought into cultivation, to charitable uses. The lands of Feroze, which before had produced but one scanty harvest, now produced two abundant ones.

This cirvar (Hissar-Feroze), ever since the conquest of Hindooostan by the Moguls, has constituted the personal estate of the heir-apparent of the empire.

[*Capt. Kirkpatrick's MSS.*]

have only to regret on the present occasion, that the description of them is so obscure.

Batnir, or Batnair, is the extreme point westwards, in Col. Polier's map. This is a most useful point in the geography of Tamerlane's march from the Panjab; being the intermediate and only point between Adjodin and Samanah. How its position, which is 30 G. miles N N W from Sarsa, and 72 south-westward from Samanah, was obtained, we are not told: however, it will be found to accord with the march of Tamerlane; and may therefore be supposed to rest on the authority of the computed distances from Samanah and Sarsa, to Batnir, and may be the result of recent inquiries.

Colonel James Browne informs us, that Batnir is also called Battinda, by the people of the Panjab; and that it is situated in a country famous for pastures, and fine horses. On the W and N W, lies the desert described by Sherefeddin; and which appears to extend to the borders of the Setlige.

Sursooty must stand on the N W of Hissar; and east by south from Batnir: for it was at the end of Tamerlane's third march from Batnir towards Samanah; and yet was four marches from the latter; whence, by the direct distance between Batnir and Samanah, which is only 72 G. miles, Tamerlane's march must make a deep curve to the east, or S E: for two of the seven marches are said to amount to 32 coses; and as he had only horse with him, the remainder were probably longer than ordinary marches. A MS. map describes the junction of the Sursooty and Caggar rivers: probably this junction is formed above Sursooty town; for Tamerlane had not crossed the Caggar when at Sursooty; and the Sursooty river lay beyond the Caggar. I conclude, therefore, that the town of Sursooty stood on the banks of the confluent rivers; perhaps nearly equidistant from Hissar and Batnir, and little more from Samanah. Tamerlane's invasion was about 40 years posterior to the time of Ferose's improvements:

but Sherefeddin is silent on the subject; from all which I conclude that the fort of Ferozeh, to which Tamerlane came the 2d day from Batnir, cannot on any account be that of Hissar-Ferozeh.

On the west of Hissar and Batnir, our knowledge, both geographical and political, is very much confined. Timur's (or Tamerlane's) route from Moultan to Batnir, the course of the Caggar river, and the road from Agimere to Jefselmere, is all that we have towards filling up so large a void. The first is from Sherefeddin; the others from Mr. Hastings's, and Col. Popham's MS. maps.

The common boundaries of Agimere, Delhi, and Moultan, we have no means of ascertaining: nor is the Ayin Acbaree particular enough on this subject, to lend any assistance towards it.

Mewat, or the hilly tract lying on the west of the Jumnah, between the parallels of Agra and Delhi, as well as the northern and eastern parts of Agimere, which are mountainous also, have their geography much improved by the MS. maps communicated by Mr. Hastings, and Col. Popham. There is little to be said on the subject of the construction of these parts. Agimere, which is the primary point that determines the parallel and scale of the western parts, will be discussed in the next Section, to which it properly belongs: the positions on the north and east of it, are taken chiefly from the MSS. just mentioned.

Jaepour, or Jaynagur, the capital of one of the Rajpoot princes in the eastern quarter of Agimere, has its longitude given by Claud Boudier, at $76^{\circ} 9'$, or $2^{\circ} 19'$ west from the city of Agra. All the MS. maps that I have consulted, place it very differently: and I find I cannot allow a greater difference than $1^{\circ} 55'$, without rejecting the scales of all the MS. maps; which, as they are formed from the difference of latitude, would be absurd. Perhaps the numbers in Claud Boudier's table, are not right: M. D'Anville has them at $76^{\circ} 5'$ in the Eclaircissements, which is still wider from probability.

It appears by M. D'Anville, that the rajah of Jaepour (by name Jeessing) had erected two observatories, one in his newly built capital of Jaepour (which is about a league from Umbeer, or Ambeer, the ancient capital), the other in one of the suburbs of Delhi. Father Claud Boudier, at the rajah's request, visited the former of these observatories about the year 1732: and I think it probable that we are indebted to the rajah's assistance for some others of the observations made by Claud Boudier; particularly those at Agra and Delhi. The latitude of Jaepour is $26^{\circ} 56'$; and M. D'Anville, in his *Antiquité Geographique de l'Inde*, reckons it 50 leagues from Delhi, which accords well with my idea of the distance between them.

The MS. maps which I have mentioned as being communicated by Mr. Hastings and Col. Popham, together with others formerly in the possession of Col. Muir, and since his death* obligingly communicated by my friend Mr. Bensley, of the East-India Direction, are corrected in bearing and scale by the primary points of Agra, Delhi, and Agimere; but only a very trifling alteration was required. It may be observed, in respect of the new matter contained in these communications, that a great number of places appear, that were familiar to us, as well in the history of former times, as in the account of recent transactions; but which we could not, heretofore, refer even to any general situation in a map. Still, however, much is wanting to render in any degree perfect, the geography of the tract in question, both as to mathematical exactness, and to relative description: in particular the latitudes and longitudes of such places, as from their being a kind of centre, from which a number of roads issue, may be regarded as *primary points*, in the geographical construction. Until these are procured, we must be content to remain in ignorance con-

* It is probable that the severe indisposition to which Col. Muir was constantly subject, from the moment of his arrival, to the time of his death, left him no leisure to recollect that such materials were in his possession. This excellent officer, and most worthy character, died in 1786.

cerning many curious particulars of Indian geography; and satisfy ourselves with having the situations of places that are the most interesting, either from having been the subjects of history, or as being connected with the politics of the present times.

Lahore is the next point, in order. This is a city of high antiquity in the Panjab, and is situated on the great road leading from Delhi to Persia, and Samarcand. For its geographical position, I have both its latitude and longitude from the tables of Ulug Beig, and Nasereddin; and also a great number of itineraries and other notices, respecting the roads between it and Sirhind. But some of the itineraries are defective, through omissions; others too obscure to be followed throughout. However, by a careful analyzation of the particulars of each, and by a comparison of the corresponding articles throughout, it appears that 93 coses of the common kind, may be taken for the distance of Lahore from Sirhind, by the road of Ludhana and Sultanpour, which is supposed to be the direct one. And of these, 52 are to be reckoned between Sirhind and Sultanpour; 41 between the latter and Lahore.

A Persian MS. map of the Panjab (of which more will be said in the sequel) gives for the distance of Rahoon from Lahore, 74 coses: and Rahoon being 22 from Sirhind, by the road of Machiawara, (Bernoulli, Vol. I. p. 113, 146) this account allows 96 coses.

In the Ayin Acbaree, the number of coses between the Panjab rivers (Vol. II. p. 132) is faulty in the particular between the Beah and Rauvee; for no more than 17 are given, when most accounts allow more than 30 in the line of the route, between Sultanpour and Lahore. Besides Firosepour, or Ferosepour, which lies at the conflux of the Beah and Setlege, and nearly opposite to Lahore, is 30 coses from that city (Kirkp. MSS.). Mr Forster also allowed about 30 coses from Ray Gaut on the Beah, to Bisooly on the Rauvee. Possibly 27 might be meant, in the Ayin Acbaree, for the breadth of the space between the two rivers, directly across: in which

case no less than 93 can well be allowed on so oblique a line as the road from Lahore to Sirhind makes. And the space between the Beah and Setlege being 50 cosses in the same book, we have 77 for the two *Doabeks*, or space between the Rauvee and Setlege: and if Machiawara be the point reckoned to, on the latter, 14 more must be added to make up the distance to Sirhind (Bern. Vol. I. p. 146), and the sum total is 91.* But laying no stress on this last calculation, I shall consider the two former ones only. And it must be allowed that they come very near to each other; the one being 93, the other 96 cosses: and the latter, the Rahoon road, is supposed to make a small angle or bend to the north, which would necessarily make it longer than the road by Ludhana. I should, however, had the difference been more considerable, give the preference to the result of the simple calculation, through Rahoon, to the compound one through Ludhana and Sultanpour; as being in its nature less subject to error: but in effect, if we consider the quality of the materials, and the various channels through which they are transmitted to us, it may be said, that *all* the different accounts, in a general view, corroborate, rather than contradict one another.

Whether we take a mean of the two accounts, or allow two cosses for the bend in the Rahoon road, it will make only half a cos difference: and if the latter rule be followed, 94 will be the number; and these produce $134\frac{1}{2}$ G. miles of direct distance; and allowing that the calculation was made from the suburbs of Lahore, $135\frac{1}{2}$, or about 95 cosses, may be taken for the distance between Sirhind and the centre of Lahore. If then 95 be added to 105, the distance of Sirhind from Delhi, the sum total will be 200 cosses: and it appears that Thevenot reports this distance between Delhi and Lahore: some accounts reckon it so high as 205.

* All the cosses of the Ayn Acbaree are of the old standard; that is, the common, or Hindoostanny cos, such as Acbar found in use when he ascended the throne. The new standard is indeed described in Vol. II. p. 222; but Abul Fazil appears to have registered the distances and dimensions of provinces, in the itinerary measure in common use: had he done otherwise, he would have been less intelligible.

A table of distances, which is supposed to have received the sanction of official approbation, at a former period, at Delhi; and which is calculated in royal or Shah Jehany cosses, is quite out, in the distance between Delhi and Lahore; for it allows only 105 cosses; whereas 150 would have been nearer the truth.

The latitude of Lahore is given by the Oriental tables, at $31^{\circ} 50'$. Col. Polier's map makes its bearing from Sirhind W $41^{\circ} 43'$ N, which would place Lahore in $32^{\circ} 12'$; but it must be observed, that the map is of too little authority in this part, to be implicitly followed. However, we may perceive what the idea of the author was; and it affords a presumptive proof that Lahore is *near* the parallel of 32° .* The tables in the Ayin Acbaree (Vol. III. p. 55) place Sealkote in lat. 33° ; and by the construction it will be found at 53 minutes north of Lahore. Jhulum and Rotas are $33^{\circ} 15'$ in the same tables; and they appear to be from 66 to 69 minutes N of Lahore. These, indeed, point to a higher parallel than 32° for that of Lahore; but I prefer the proper parallel assigned to it in the Ayin Acbaree, and in the tables of Ulug Beig and Nasreddin; that is, $31^{\circ} 50'$.

If then we lay off $135\frac{1}{2}$ G. miles to that parallel, Lahore will stand in longitude $73^{\circ} 50'$; or $6^{\circ} 26'$ W of Canoge. The difference of longitude between the same places being $6^{\circ} 30'$, in the same tables, proves that Lahore occupies, in my construction, the place assigned it by the Oriental geographers. It is also by the same tables, $24^{\circ} 20'$ east of Cashin, or Kaswin; and by M. Beauchamp's observation (in 1787), the difference is $24^{\circ} 16'$.

I have been thus particular on the subject of Lahore, because it forms a most capital point in this geography: for on it depend all the positions between Sirhind and Cabul. It is much to be regretted that we are not in possession of a good observation of lati-

* Mr. Forster, who travelled from Loldong to Junmoo, in 1783, gives a general idea of his course, which was too far northward to allow of Lahore being to the south of the position assigned it. (See Vol. I. p. 226.)

tude, taken there; as well as its exact distance from Sirhind, or Delhi; or both.

Lahore was the residence of the first Mahomedan conquerors of Hindoostan, before they established themselves in the central parts of the country. It owed its modern improvements, however, to Humaioon, the father of Acbar, who made it his residence during a part of his troublesome reign. Thevenot says, that including the suburbs, it was 3 leagues in length at that period; and, when he saw it, about the year 1665, the city itself was above a league in extent. Jehanguire, son of Acbar, allowed the Portuguese to build a church there; and some of its furniture remained at the time of Thevenot's visit.

The Rauvee (the ancient Hydraotes) on which it is situated, is a noble river; and by its navigable course, has a communication with the Indus and all its branches. The province, of which Lahore is the capital, is oftener named Panjab, than Lahore: however, Panjab being applied to a natural division of country, is applicable also, to part of Moultan. It is very extensive, and remarkably fertile; affording, in addition to all the necessaries of life, wine, sugars, and cotton wool; the last of which supplied the manufactories of the province. There are also in the tract between the Indus and Jhulum (or Behut), salt mines, wonderfully productive: and affording fragments of rock salt, hard enough to be formed into vessels, &c. Gold (according to the Ayin Acbaree) was found in the channels of its rivers; and the same is related of those of Kemafoon, which proceed from the same ridge of mountains. Ice is brought from the northern mountains, to Lahore, and sold there all the year. The famous avenue of shady trees, so much spoken of by the early Indian travellers, began at Lahore, and extended to Agra, near 500 English miles. Lahore is now the capital of the Seiks, a new power, whose name, even as a sect, was hardly known, until the rapid decline of the Mogul's empire, in the present century.

The next place, in point of consequence to the construction of this part of the map, is Attock, a city and fortress on the eastern bank of the Indus, and built by Acbar in the year 1581. We shall have occasion to speak on the subject of its historical importance hereafter. The position of this place is collected from various authorities. Unluckily its latitude is omitted in the Ayin Achbaree: and it can only be collected generally from that of the places lying on each side of it; and on the road passing through it from Lahore to Cabul: that is, Paishawur on the one, and Rotas, Jhulum, and Sealkote on the other. From these, as well as the distance of Attock from Jummeo, from Bheerah, and from Cashmere, respectively; it may be clearly inferred, that Attock is above the 33d degree, by several minutes. Paishawur is given at $33^{\circ} 25'$; Rotas and Jhulum at $33^{\circ} 15'$; and Sealkote at 33° ; as we have said before: and Attock lies in the direct road from Paishawur to the other three places. Another proof is, that the shortest road from Lahore to Cabul, that is, the direct line between the two, is through Bungush, which lies to the south of Attock: and the pass of Deenkote, over the Indus, to Bungush, lies above the parallel of 32° and a half, and is supposed to be 30 miles below, or to the S of Attock: of course Attock should be above the parallel of 33° . We shall enter more particularly into this subject, when we have discussed its longitude.

With respect to the longitude of Attock from Lahore, we receive very capital assistance from the invaluable communications of Capt. Kirkpatrick, who has collected from various Persian MSS. and histories, the registers of the actual measured distances, as taken by the orders of the Emperors Acbar, Shah Jehan, and others, on the great roads from the city of Lahore, Cabul, Ghizni, Candahar, and Moultan; and back to Lahore again: as well as those between Cashmere and the cities of Lahore and Attock, respectively; and between Cabul, Balk, and Bamian: besides many other portions of different roads, too tedious to mention.

These road measures, it is true, cannot be applied to geographical purposes with critical exactness; but as an approximation to the horizontal distance may be obtained by an allowance for the inflexions of the roads, founded on experience, and applied with the requisite attention to the nature of the country; which Capt. Kirkpatrick has enabled us to do; such materials must at least be superior to computed distances, resting on the vague report, or on the judgment of an individual.

But these measurements being set forth without any intimation concerning their direction, as it respects the points of the compass, we have been necessitated to call in other aids; since the latitudes are seldom given; or if given at all, not with the requisite exactness. We shall now proceed to set forth those authorities on which the longitude of Attock rests, in respect of Lahore: in order to which, we must first establish the intermediate position of Rotas.

The principal, or most frequented road from Lahore to Attock, is by Rotas; and it makes a deep bend to the north, although the bearing between the two is nearer N W by W. The reason may be, to avoid as much as possible the rugged and hilly tract of Jowp, through which the direct road by Bheerah leads. That the Rotas road takes the bend abovementioned, is proved by several circumstances: 1st. The latitudes of Rotas, Jhyulum, and Sealkote. 2d. The proximity of Rotas to Bember, well known to lie north of Lahore, and in the direct road to Cashmire, which also lies north of Lahore. 3d. The great length of the road by Rotas, compared with that by Bheerah. 4th. The Persian map of the Panjab places Rotas about N 37° W from Lahore, and Jummoo N 10° E. (as nearly as the angles can be measured on such kind of map); that is, the angle subtended by the two, is 47 degrees. Now we shall hereafter prove, by the distance between Sirhind, Bissooly, and Jummoo, that this last place is really about N by E from Lahore; and its distance, in the map of Panjab, is 50 coses. And as we collect from Sherefeddin, that Timur marched 33

cosses between Jummoo and the Behut river, the distance of Rotas from that river, added to the other, agrees to an angle of about 43 degrees; and may be deemed, at least, a strong presumptive proof, that Rotas bears about N W by N from Lahore. 5th. Seal-kote, which lies 10 cosses from Jummoo, in the road to Lahore, is 4 marches distant from the river Jhulum, near the town of that name. These marches were made by the Emperor Baber, and are reported by Capt. Kirkpatrick: they may be taken at 44 G. miles direct distance, reckoning the mean march at 14 B. miles, by the road; or 11 G. miles direct.

The distance of Rotas from Lahore, is very correctly given by Capt. Kirkpatrick, at 41 *royal cosses* (or those of Shah Jehan) of 4995 yards each, and allowing 1 in 9 for the winding in ordinary cases,* each coss, in horizontal or direct distance, will be equal to 2,021 1/4 G. miles; or 29,68 such cosses will be equal to a degree. Forty-one cosses then, are equal to nearly 83 G. miles, when the general direction of the road does not undergo a change: but here we have evidence that it changes at the crossing-place of the Chu-naub river, 23 cosses from Lahore; and the loss of distance, by the angle, may reduce that of Rotas to 81 1/2: and Rotas will then stand in lat. $32^{\circ} 58'$, instead of $33^{\circ} 15'$ of the tables: provided Lahore be in $31^{\circ} 50'$, as we have reason to believe.

The town of Gujerat lies on the Rotas road, between the Chu-naub and Jhulum, at four or five miles from the former. Purchas (Vol. I. p. 434) says, that Bember is 16 cosses N or N E from Gujerat; and as Attock is reckoned 138 such cosses from Lahore, 16 would produce $19\frac{1}{2}$ G. miles: and Bember being 33 Achbaree cosses,† on a bearing of N, a little W from Lahore, this appears consistent, and regulates the connexion of the two roads which lead to Attock and Cashmere respectively. It must be noted, that

* Or, in other words, the distance by the road is allowed to be one-eighth more than the direct distance.

† These are of 4757 yards each, and, with an allowance for the windings of the road, are taken at 1,925 G. miles each: or 31,16 are equal to a degree. [Kirkp. MSS.]

these roads are common for the first $10\frac{1}{2}$ royal coses; when the Bember road turns to the right, crossing the Chunaub at a ferry, six miles farther from Lahore than that which leads to Rotas; by which we ascertain that the Chunaub has a S W course here; as indeed it appears to have all the way from Kishtewar, near its fountains, to the Indus.

From Rotas to Attock the measured distance is 43 royal coses, or 87 G. miles, in direct distance. The bearing is a little to the west of north by circumstances; for Paishawur is 10 minutes to the N of Rotas, in the tables, and Attock lies to the E by S, or E S E, of Paishawur, about 34 G. miles. The relative positions of these places, which affect those of Husan Abdal and Cashmere, depend on the following *data*:

Mr. Forster crossed the Indus at Bazaar, 10 coses above, or to the north-eastward of Attock. From Bazaar to Paishawur, he estimated at 29 coses, W by S; according to which, Attock should bear from Paishawur about E by S, distant 24 coses (common). Capt. Kirkpatrick's report is $15\frac{1}{2}$ royal coses, or nearly 32 G. miles; and allowing the breadth of the Indus, and to the centre of each city, probably 34 may be reckoned; which will approach nearly to 24 coses. But it would appear by the construction, that Paishawur should bear rather to the west, than W by S, from Bazaar; and then Attock will be E S E, instead of E by S, from the former.

In adjusting the latitudes of Attock and Paishawur, regard is to be had to the discordancy between the difference of latitude deduced from the tables, and that arising from the construction between Lahore, Rotas, Sealkote, &c. We have before observed (page 85), that Lahore being in $31^{\circ} 50'$, Rotas falls by construction in lat. $32^{\circ} 58'$, which is 17 minutes S of its latitude in the tables. Then, as we have no rule for correcting the latitude of Paishawur, which by the tables is only 10 minutes N of Rotas, whilst the construction allows 27, we can only call in aid a slight check, which the computed distance, by the direct road of Bheerah,

affords to the position of Attock. Bheerah is 60 common coses from Lahore, in a westerly direction. It appears in the Panjab map, a little to the N of W; and at 160 parts in 235, of the distance from Rotas to Moultan. And as Moultan (as we shall hereafter make appear) is 126 common coses from Beinber, whose position is ascertained in respect of Rotas and Lahore, Bheerah must be placed at about 11 minutes N of the parallel of Lahore; and at $85\frac{1}{2}$ G. miles distant from it; that being the produce of the 60 coses.

From Bheerah the Emperor Baber made seven marches* to Nilab, near Attock (Kirkp. MSS.), and these I take at 77 G. miles; which intersect the line of distance from Rotas (87 G. miles) in lat. $33^{\circ} 4'$, and as Paishawur lies about W N W, distant 34 G. miles from Attock, its latitude should not be more than $33^{\circ} 18'$. In the tables it is $33^{\circ} 25'$; I have placed it in $33^{\circ} 18'$, lon. $70^{\circ} 36'$; and Attock in lat. $33^{\circ} 6'$, lon. $71^{\circ} 15'$; and this allows nearly a mean between the difference of latitude by the tables, and that by the construction.[†]

There is no kind of rule given for ascertaining the distance between Attock and Moultan: nor do the measured distances between Lahore and Cashmere, and Cashmere and Attock, serve at all to prove the position of the latter, more than *presumptively*; because the bearings are wanting.

Before I proceed to discuss the remaining positions in the Panjab, it will be proper to establish the positions of Cabul, Candahar, &c. because that of Moultan depends on Candahar: and without Moultan, the arrangement of the Panjab would be incomplete.

From Paishawur to Cabul, the measured distance is 62 royal

* This route lay through Pirhalia, which lies out of the direct line, it being only six marches from the Jhyum river, near the site of the town of the same name.

[†] The Ayin Acharee, Vol. II. p. 131, allows 180 coses for the length of the Panjab, from the Seilge to the Sinda: but no particular points on those rivers are specified. Attock is probably alluded to on the Sinda: Ludhana, or Machiawara, on the Seilge. My new map gives 185 between Attock and Ludhana; 188 to Machiawara.

cosses, or 125 G. miles direct distance, with the allowance for the ordinary degree of winding; but some mountainous tracts intervening, I allow only 123: and this distance laid off to $34^{\circ} 30'$, the latitude given for Cabul in the tables, places it in longitude $68^{\circ} 34'$. Mr. Forster reckoned 90 cosses, or about 129 G. miles: Otter reports six days journey, between Paishawur and Cabul.

It appears that the aggregate distance from Lahore to Cabul, by Attock, is given at 159 royal cosses; but the distance by the southern road, by Bheerah and Deenkote, is said to be much shorter. Capt. Kirkpatrick however, has not been able, as yet, to procure a statement of the distance, even in the gross.

If we trace the line of measured distances from Cabul to Balk, in latitude $36^{\circ} 21'$, the 98 royal cosses give 198 G. miles; and these a difference of longitude of $3^{\circ} 5'$, which places Balk in longitude $65^{\circ} 31'$. In the tables of Nasereddin and Ulug Beig, Balk stands 101° east of the *Fortunate Islands*, or 16° east of Casbin; which by M. Beauchamp's observation, is $49^{\circ} 33'$ E of Greenwich: and this result places Balk in $65^{\circ} 33'$; only 2 minutes different from that, deduced from the opposite quarter, by construction. And if we compare the tabular difference of longitude between Balk and Canoge, it will be found to be $14^{\circ} 50'$: whilst that by construction is $14^{\circ} 45'$.* The position of Balk, therefore, appears to be perfectly well adjusted, as far as can be judged by the quality of the materials before us; and corroborates that of Cabul.

But the longitude of Cabul being $104^{\circ} 40'$ in the same tables, does not agree with the construction; which allows $11^{\circ} 42'$ difference of lon. from Canoge; whilst that by the tables is only $11^{\circ} 10'$. This may be either an error in the copying of the tables, or in the original formation of them: probably the former, as

* By the tables of Ulug Beig and Nasereddin.	By construction.
Canoge - $115^{\circ} 50'$ east of the Fortunate Islands.	$80^{\circ} 16'$ east of Greenwich.
Balk - $101^{\circ} 00'$	$65^{\circ} 31'$
Difference $14^{\circ} 50'$	Difference $14^{\circ} 45'$

as Lahore is right; and then it might have been $104^{\circ} 4'$, instead of $104^{\circ} 40'$. Candahar affords no light to us on the occasion, as its numbers are totally out. It may be observed in general, that the longitudes in the tables of Nasereddin, &c. along the *southern* line, between the Caspian sea and Lahore, through Herat, are falsely written, or calculated; whilst those in the *northern* line, through Nisabour, Meru, and Balk, agree with the intermediate distances.

Ghizni is reckoned 28 royal coses from Cabul, or about $56\frac{1}{2}$ G. miles. Mr. Forster reckons the distance $20\frac{1}{2}$ farsangs; and says that a farsang is reckoned equal to 2 Hindoostanny, or common coses: on this proportion the direct distance will be $58\frac{1}{2}$ G. miles. The bearing he estimated at S $\frac{1}{2}$ W: and the difference of latitude in the tables being 55 minutes, agrees with the first report; and both seem to prove that a farsang is less than two Hindoostanny coses.* M. Petis de la Croix, in his life of Gengiz Cawn, says that Ghizni is 8 journeys from Bamian; but as this last is placed on the authority of measured distances from Balk and Cabul, it agrees to 8 *marches* of an army, instead of *ordinary journeys*, from Ghizni; and I conclude that M. Petis de la Croix, ought to have read *marches* in the Oriental author whom he consulted. Ghizni is accordingly placed in lat. $33^{\circ} 35'$, and 88 G. miles from Bamian; in which position it stands also about S by W from Cabul.

Candahar is given at 83 royal coses from Ghizni (Kirkp. MSS.), or about $167\frac{1}{2}$ G. miles. However, there is great reason to believe that this measured route, which was that of an army with artillery and carriages, was not the direct one: for Mr. Forster went by a different route, and reckoned the distance only $51\frac{1}{2}$

* It appears by Mr. Forster's route from Candahar to the Caspian sea, that more than $23\frac{1}{2}$ farsangs were required to make a degree of a great circle; and as 42 Hindoostanny coses are equal to a degree (see page 5), two such coses will exceed a farsang, in the proportion of nearly one-seventh part. So loosely are the comparisons between the itinerary measures of different countries made! Thevenot says that a cos is equal to *baff a league*!

farsangs; or at most 103 common coses, which produce 147 G. miles. The direct road from Cabul to Candahar, leaves Ghizni far to the south: and the distance, according to a MS. of Col. Popham's, is 122 coses, stated to be short ones. If common ones, they will produce 176 G. miles; and will agree with the distance produced by the compound course and distance of Mr. Forster, through Ghizni; Candahar being, as is supposed, in, or near the parallel of 33° ; according to the tables: and according to this authority, Candahar will be in lon. $65^{\circ} 33'$.

I return from this long but necessary digression, to discuss the position of the city of Moultan, which gave rise to it.

Moultan is placed according to the measured *road distance* from Candahar and Lahore; which is corroborated by its distance from Bember. Its latitude in the Oriental tables will by no means accord with the result of those distances; and the difference is a large portion of a degree: for the tables in question give $29^{\circ} 40'$, whilst the intersection of the distances points to about $30\frac{1}{2}^{\circ}$. Its distance from Attock is not given, which is unlucky, considering the great length and obliquity of the lines from Lahore and Candahar. But, for the following reasons, I conceive that Moultan cannot be lower than the parallel of $30\frac{1}{2}^{\circ}$.

1st. We learn from Capt. Kirkpatrick's MSS. that the distance of Moultan from Lahore, by the road which Dara Sheko marched to it, in his way to Candahar, is 77 royal coses. But the tables of distances give only 70; and this number is frequently repeated; so that 70 is probably the distance by the directest road; 77 by the great road: and the mean of the two, $73\frac{1}{2}$, may be the properest for our purpose; as the rule for calculating the horizontal distance, is founded on the supposition of a *moderate degree* of winding in the road. And we learn from the same authority, that the road marched by Dara Sheko, from Moultan to Candahar, was 160 royal coses. Now 160 royal coses produce $323\frac{1}{4}$ G. miles of direct distance; and $73\frac{1}{2}$, $148\frac{1}{2}$: and the intersection of these lines

of distance, places Moultan in latitude $30^{\circ} 34'$, lon. $71^{\circ} 21'$. The very great length of the line from Candahar, renders it unlikely that the horizontal distance is under-rated; and therefore the probability is, that Moultan is rather *above* than *below* the parallel of $30^{\circ} 34'$.

2d. We find by the Ayin Acbaree (Vol. II. p. 196; and also p. 98, *et seq.* of the *Tukseem Jumma*) that the Chowkundy district forms the frontier of the soubah of Moultan, on the north-east; where it is joined by the district of Shoor, in that of Lahore: as also, that the said district of Chowkundy occupies both shores of the river Rauvee; whose course is understood to be nearly S W by W, between Lahore and Moultan. And the same book, in describing the dimensions of the soubah of Lahore (page 191), says, that it is in breadth from Bember to Chowkundy, 86 cofses (that is, common cofses, as we have before observed); so that the common boundary of Lahore and Moultan, in the point that touches the river Rauvee, is 86 cofses from Bember; the situation of which is discussed in page 85. We learn also from Bernoulli (Vol. I. p. 117), who took it from Persian MSS. translated by Anquetel du Perron, that Satgurrah is synonymous with Chowkundy; that it forms the N E frontier of Moultan; and is 40 cofses above the city of Moultan. If then we add these 40 cofses to the 86, we have 126 cofses, or 180 G. miles, for the distance of the city of Moultan from Bember, bating possibly a trifle lost by the angle which the lines make at Chowkundy; and which cannot be estimated at more than 4 miles: therefore Moultan may be taken at 176 G. miles from Bember; and this distance reaches within three miles of the position of Moultan, resulting from the abovementioned distances from Candahar and Lahore. It may be remarked, that if the whole distance between Bember and Moultan, 176 G. miles, consisted of difference of latitude, it would not reach below the parallel of 30 degrees.

3d. The distance between Batnir and Toulumba, a pass on the Rauvee, 35 cofses above Moultan, may be so well ascertained in

a general way, by the marches of Tamerlane, as to prove the great improbability of Moultan being to the south of 30 degrees and a half. Batnir is placed on the authority of Col. Polier's map, page 76.

Timur, or Tamerlane, made two marches (with his whole army) from Toulumba to the neighbourhood of the Beyah river; and part of a third, to the place where he crossed it, near Jenjian. Allow 30 B. road miles for the two marches, and 4 more for part of the third march: total 34 B. miles, or 26 G. miles in direct distance. And Jenjian being 40 cosses from Moultan (Sherefeddin), Toulumba only 35, the course must have been between S E and S S E. Then he was 4 more days between Jenjian and Adjodin (or Puttan); 1st. Schoual; 2d. Asouan; 3d. Jehaul; and 4th. Adjodin. The three first marches being on the road from Moultan to Samanah, may be taken at E by S, or E S E; and the fourth towards Batnir, more to the S E. And for the distance allow 45 road miles for the three marches; and for the fourth, when Timur had separated from his grand army, and marched with horse only, 20: total 65 road miles, or 50 G. miles in direct distance from Jenjian to Adjodin; course E by S to E S E. Lastly, from Adjodin to Batnir, Sherefeddin gives 60 cosses, or about $85\frac{1}{2}$ G. miles.

Add then the several numbers 26, 50, and $85\frac{1}{2}$, together, and the sum total of the distance between Toulumba and Batnir, will be $161\frac{1}{2}$ G. miles. And Moultan being (by article 2d) 126 cosses from Bember; and Toulumba, according to Sherefeddin and others, 35 from Moultan, towards Bember; it is certain that if we lay off 91 cosses, the complement of 35, from Bember, to meet the line of distance from Batnir, we shall gain the position of Toulumba; which, by these authorities, falls in Latitude 31° , and in the direct line between Lahore and Moultan, as determined by articles 1st and 2d. And this is really the position that Toulumba is understood to occupy: but had Moultan been more to the south,

and especially near the parallel set forth in the tables, Toulumba must have stood much nearer to Batnir; and would have been at variance with other positions, inferred from the MS. map of the Panjab, which it now agrees with.

4th. The distance of Moultan from Tatta, in the Persian tables of distances, 226 royal coses, reaches nearly to latitude 31° ; and

5th. I may add the opinion of M. Bernoulli (Vol. I. p. 116), that by the itineraries, Moultan cannot be much lower than that parallel.

Such being the authorities for the position of Moultan, I have placed it in latitude $30^{\circ} 34'$, longitude $71^{\circ} 21'$. Its longitude is much out in the Oriental tables, and varies in different books.

Thevenot describes Moultan as a city of small extent for the capital of a viceroyalty, but strongly fortified, and having a Hindoo pagoda of great celebrity. The Ayin Acbaree represents it as one of the most ancient cities of Hindoostan. It has, or had, a great manufacture of cotton cloths; the province itself producing the cotton: as well as sugar, opium, galls, brimstone, &c. Thevenot describes the river that led to Moultan, as being partly choked up, or spoiled in its channel, in his time (about 1665), and this had greatly lessened its trade. He also takes notice of a particular sect of Hindoos there, called *Catry*; and says, that this is their proper country. In another place he explains the *Catry* tribe to mean *Rajpoots*, or warriors; that is, the *Kuttry* tribe, properly. We shall take notice hereafter, that these *Catries* were the *Catheri* of Diodorus, and the *Cathei* of Arrian; with whom Alexander warred, on the borders of the *Malli*: for it can hardly be doubted that Moultan is the modern capital of the country, which was designed by the historians of Alexander for that of the *MALLI*, although the ancient capital stood nearer to Toulumba. Moultan has been garrisoned by the King of Candahar's troops, since the year 1779; according to Col. Browne's information.

Having thus ascertained (with what degree of accuracy, the

reader must determine for himself) the three important points of LAHORE, ATTOCK, and MOULTAN, which are the foundations on which the scale, and relative parts of the whole Panjab country depend, I shall proceed to the detail of the geographical construction of the tract itself.

In describing the geography of a country which derives its very character and name from its rivers, it may be proper to convey a general idea of the courses of those rivers, before we attempt the particulars of its geography. Of the five rivers that give name to the Panjab, the Indus is not considered as one: it is rather the trunk, or stock, to which the Panjab rivers, and those of Cabul, are subordinate branches. This river, however, from its connexion with the subject of the Panjab, ought to be the first noticed. It is formed of about 10 principal streams, which descend from the mountains of Persia, Tartary, and Hindooostan, on the north-east, and north-west: and all these streams uniting near Moul-tan, form that celebrated river known to Europeans under the name of INDUS; and to Asiatics under that of SINDE, or SINDEH.* The Ayin Achbaree says, "the Sinde, according to some, rises be-tween Cashmere and Cashgar, whilst others place its source in KHATAI." (By Khatai, I believe Koten, the *Cbatae* of Ptolemy, is meant, and not CHINA.) However, it is clear that the people of Hindooostan consider the north-eastern branch as the true Sinde.† The Emperor Baber, indeed, applies the name of Sinde to one of its western branches, that springs near Bamian: but he appears to differ from the rest of his countrymen in this particular; for the name of Nilab, which was applied to the river that ran by the site of Attock (long before that city was founded), was applied also to the same river, in its course through Little Thibet: and NILAB is synonymous with SINDE.

* The name Sinde was not unknown to the Romans: *Indus incolis Sindus appellatur*. Pliny, Book VI.

† The ancients reckoned otherwise; the same Pliny continues to say, *in iugis Caucasi montis, quod vocatur Paropamisus, ad versus solis ortum effusus*.

Before we proceed to detail the information relating to the upper part of the course of the Indus, it may not be improper to say a word on the subject of the name Nilab, which, in its application, has occasioned some confusion.

It appears from the commentaries of Baber, and other authorities quoted by Capt. Kirkpatrick, that early in the 16th century, a city named *Nilab*, stood on the east bank of the Indus, at a small distance below its conflux with the Cabul river. This city is called in the histories, *old Nilab*, which implies, that it was then an ancient city. [Ptolemy has a city of nearly the same name (*Naubibe*), on the opposite side of the Indus. *Asie Tab. X.*] The city of Attock, founded by Acbar, in a manner succeeded *Nilab*; their situations differing but little.

It may be conceived from the apparent etymology, that the city originally took its name from the river; which was more generally known by the name of *Nilab*, than *Sinde* (*Nil-ab* signifies the *blue river*). *AADUL HUMEED LAHORI*, and *MAHOMED KAZIM*, both apply the name of *Nilab* to the *Sinde*, or *Indus*; the former, an author of great reputation both as an historian and a geographer, speaking of a march of the Emperor Shah Jehan, says, that "he came to the banks of the *Sinde*, better known by "the name of *Nilab*, opposite to the fort of *Attock*;" which applies directly to the point. The same idea is given by *ABDUL KURRIM* (a Cashmerian of distinction, whose memoirs have been translated by Mr. Gladwin). Speaking of Nadir Shah's crossing the rivers above Attock (page 12), he says, "These five streams unite at "the ferry of *Paishawur*; which confluence is called the *ATTOCK*: "in ancient books it is called the *Nilab*." The ferry of *Paishawur*, doubtless means that of Attock itself, which leads across to the province of *Paishawur*. It is however certain, that by a strange want of accuracy, the name *Nilab* came to be applied also to an adjunct river, that is, to a part at least of the river of *Cabul*; for

SOOJAN RAE says, that Jalalabad and Dakkah are situated on the Nilab.*

There can be little doubt after the testimony of Abdul Humeed, but that the name *Nilab* was one of the proper names of the Indus; and even that by which it was best known. And that it was named so in a remote part of its course (that is in Little Thibet, from whence it flows), we have a proof from Abdul Humeed's History of Shah Jehan; in which the expedition of Zuffer Khan, into Little Thibet, in 1658, is recorded. In this account, the Nilab is repeatedly mentioned; and once, as a deep river.

The scene of Zuffer Khan's warfare being near *Shekerdou*, and *Shuker*, places situated from 12 to 14 caravan journeys from Cashmere,† towards Kashgar (that is, in a N by W, or N N W direction), the furthest of these points on the Nilab, or Indus, must be at least 230 G. miles above Attock. It was a new fact to me, when Capt. Kirkpatrick's MSS. arrived, that the Indus came through the country of Little Thibet; but it appears to be perfectly well authenticated: and is, indeed, no more than a commencement of the same line of course, which it holds lower down. How remote its course may be from Shuker, must remain a *desideratum*. If far remote, it must be from the north, because the vast ridge of mountains which lies immediately on the east of Little Thibet, and the continuation of those of Hindo Kho on the north-west, confine the space in both those quarters: and as the heads of the Jihon, or Oxus, run from thence to the west, and the rivers

* Capt. Kirkpatrick, whose opinion ought to be of the greatest weight, from the closeness of his investigations, and his usual caution in deciding, thinks that the names of *Nilab* and *Attock*, as far as they respected the *adjunct river*, were confined merely to the part near the conflux; for instance, between Attock and Paishawur; and that the name of Attock intended Nilab, on occasion of the founding of the city of Attock. If the city situated at the conflux, gave name to one of the confluent rivers, it might as well to the other; since it was on occasion of their leading to such a city.

† This account is found in Bernier, Vol. II. Letter ix.—where Kashgar is said to be 44 caravan journeys from Cashmere: and allowing for the extraordinary roughness of the country between Cashmere and Little Thibet, 11 G. miles may be taken for each day. Accordingly, Shuker will be 154 G. miles N by W, or thereabouts, from the capital of Cashmere.

of Koten, &c. to the east, the Indus can only come from the north.

It may be expected that I should explain the cause of so great a change in my opinions, respecting the head of the Indus, since the publication of the first edition of this work. The truth is, that after a long course of inquiry and investigation, I collected the following facts: That Cashgar, Koten, &c. by their known position in respect of Samarcand, must bear to the west, rather than to the *east* of north, from Cashmere: also that the ridge of mountains on the west of Cashgar, Koten, and Karia, can be no other than that which separates those countries from Little Thibet and Badakshan; and that joins on the south to Cashmere. This being the case, that vast space described by M. D' Anville between Badakshan and Koten, does not in fact exist; and the head of the Indus can only be on the west of the great ridge; because on the east of it, the rivers all run in a direction opposite to that of the Indus.

It is also very clear, that this great ridge, which has a course not far from meridional, and joins on the south to Cashmere, is really the IMAUS of the ancient geographers, which separated the two Scythias: for bordering on the west of Ptolemy's Imaus, and as nearly as possible in the true latitude, are the BYLTAE; and on the opposite side the CHAURANEI: and these answer precisely to BALTSRAN (the proper name of Little Thibet, *Lett. Edif.* Vol. XV. p. 188), and KAUBIA, or KARIA, of the present times. In like manner, the SACÆ and SAKITA; CHATÆ and KOTEN; CASIA and CASHGAR, will be found to correspond; and all conspire to place the ridge of Imaus nearly in the meridian of Cashmere. But Ptolemy's longitude is so enormously extended, that his Imaus, the famous boundary of the two Scythias, is carried beyond the head of the Ganges, when it ought to be at that of the Indus. Mr. Pinkerton, with great judgment and discrimination, has described this boundary as it ought to be, in his Dissertation on the Origin

and Progress of the Scythians, &c. although he has not shewn on what grounds he formed his opinion. It is obvious that the extent of *Scythia intra Imaum*, must undergo a great reduction in consequence of this correction.

From the point at which we have fixed the course of the Nilab, or Sinde, in Little Thibet, to the place where it is noticed in the Ayin Acbaree, as passing through the borders of Sewad (or Sowhad), we know nothing concerning the particulars of its course. About a degree lower down, and at 20 miles above Attock, Mr. Forster crossed it in 1783. It was then the 10th of July, and he remarks, that no rain had then fallen in that neighbourhood: but we know that the periodical rains must have commenced in the northern mountains near three months before, and of course must have swelled the river very considerably: for Mr. Forster judged the breadth of the stream to be three quarters of a mile. It was also very rapid, and turbulent, although not agitated by any wind. He observed also, that the water was extremely cold, and that a great deal of black sand was suspended in it.

The river of Cabul, after receiving those of Sewad, Bijore, &c. joins the Indus at Attock, and increases it very considerably; for though the Indus is sometimes fordable above Attock, we never hear of its having been forded below that point. From Attock downwards to Moultan, or to the conflux of the Panjab waters, this river has obtained the name of Attock; and below that point, Soor, or Shoor, until it divides itself into a number of branches near Tatta; where the principal branch takes the name of Mehran. The river, however, when spoken of generally, is called Sinde; although particular parts of it are known by different names.

The course of the Indus below Moultan, has its particulars from M. D'Anville; but the general direction of its course is considerably more to the west than he describes it. This is occasioned by my placing its *embouchure* so much farther west than usual, in

respect of Bombay, while the position of Moultan remains nearly as it formerly was. I observe, that most of the old maps of India give the Indus much the same course as I have done.

As I have a good deal to say on the subject of the lower part of the Indus, and particularly of its delta; which would break the thread of my present subject; I shall reserve it for a distinct head, and proceed with the geography of the Panjab, and its rivers.

The next river to the east of the Sinde, or Attock, and the westmost of the *five rivers*, is, in modern language, called Behut, or Jhulum (and often *Cbelum*); and its general course is nearly parallel to that of the Attock, but its bulk is less. This is the famous Hydaspes of Alexander, and said by the Ayin Acbaree to be anciently called *Bedusta*. According to Abdul Huimeed, it is "larger than the Tigris;" but I conclude he meant to speak of the lower part of its course. The Behut issues from the spring of *Wair* (or Wair Naig), in the S E part of Cashmere, and after a N W course through that valley, enters the mountains at Barehmoolah. During this short course, it receives abundance of rivulets and streams, forms some large lakes, and becomes navigable at a few miles below its remotest spring. After entering the mountains, it pursues the direction of the Panjab by a very crooked course, being pent up in a deep winding valley, whilst escaping from the wide base of the Cashmerian mountains; and rushing with such rapidity and violence, that even the stoutest elephant cannot preserve his footing in it. It emerges from the mountains, in the district of Puckholi, and is afterwards joined by two small but celebrated rivers, named Kishengonga, and Nainsook. After this it traverses the territory of the Ghickers, still holding its course through a hilly country, until it crosses the upper or great road leading from Lahore to Attock, where the hilly tract is confined to the western bank. Here stood, not long since, a city of the name of Jhulum; which communicated its name to the river, during the remaining part of its course: and hence it is as commonly named Jhulum

as Behut. From Jhulum it pursues its course along the eastern border of the Joud mountains, and unites with the Chunaub at about 50 G. miles above Moultan; losing its name in that of the Chunaub, as heretofore it lost its name of *Hydaspes*, in that of *Acesines*, the ancient name of the Chunaub. The space between the Behut and the Indus, in the widest part, is about 94 G. miles. Pliny allows only 120 Roman miles between the Indus and Hydaspes.

The Behut, or Cashmere river, was supposed by M. D'Anville (though erroneously) to join the Sinde at Attock. Tavernier seems to have led M. D'Anville into this mistake; which has finally been the occasion of his misplacing, and of course mis-naming, all the other four rivers. The fact is, that the river which runs by Cabul, and, in the lower part of its course, bears the name of Attock, joins the Sinde on the west side, and in front of the city of Attock. We are obliged to Mr. George Forster, in the first instance, for clearing up this mistake: and finally, to the very particular and pointed observations of Capt. Kirkpatrick, for illustrating the courses of the rivers in general, in this quarter.

The second of the Panjab rivers is the Chunaub, or Jenaub; and is, as we have said before, the *Acesines* of Alexander. The Ayin Acbaree does not record its ancient name: Ptolemy names it *Sandabalis*. This river is larger than the Behut, and has its sources more remote; for it rises on the east of Kishtewar, and has two distinct heads, which unite below the line of Mr. Forster's route. Its general course is remarkably straight from N E to S W; and after leaving Jummoo, is through a flat country, gradually approaching the Behut. We have very tolerable authority for fixing the place of confluence: for Timur was only one day in marching from it to Toulumba, a point already fixed (page 92); and, by circumstances, the direction of his march was south-eastward, or S S E. The junction of these rivers is effected with great violence and noise, and no less danger to navigators: and this

circumstance is particularly noticed both by the historians of Alexander, and of Timur. The space between the Chunaub and Behut, is no where more than 30 G. miles, within the limits of the Panjab.

The third river is the Rauvee, or *Hydrates* of Alexander;* on the south bank of which stands the city of Lahore. This is spoken of as a noble river, but appears to be somewhat inferior in bulk to the Chunaub. Its sources are in the mountains near Nagorkote, a famous place of Hindoo worship; and it enters the plains near Shahpour (called also Rajepour), from whence the famous canal of Shah Nehr was drawn to Lahore, $48\frac{1}{2}$ common cosses in length. The intent of this canal seems to have been, to supply the city of Lahore in the dry season; when all the Indian rivers are from 20 to 30 feet below the level of their banks. Three other canals, for the purpose of watering the country on the S and E of Lahore, were drawn from the same place.

The space between the Rauvee and Chunaub, at their entry on the plains, is about 54 G. miles; and they gradually approach each other during a course of 170 miles.

The junction of the Rauvee with the Chunaub (or rather the Chunaub and Behut collectively), is effected nearly midway between Toulumba and Moultan; for the itinerary of a missionary (dated 1662)† mentions, that the party were four days in going by water from Toulumba to Moultan; and that on the second day they came to the mouth of the Chunaub. The Ayin Aebaree allows 27 cosses between the junction of the Behut and Chunaub, and that of the Rauvee with the Chunaub: but from circumstances, the distance must be applied to the course of the river, not

* Said by the Ayin Aebaree to be anciently named *Jyrawutty* (Mr. Gladwin's translation). Sir Charles Boughton Rome translates it from his copy of the Ayin Aebaree, *Iravati*.

† This itinerary was obligingly communicated by the late Mr. George Perry, and appears to have been kept by a missionary who travelled from Delhi to Persia, by way of the Panjab and Sindy. It should be observed, that all the latitudes in it are too far south. The Latitude of Agra is set down at $26^{\circ} 45'$, though its true latitude is $27^{\circ} 15'$. And Moultan in $29^{\circ} 32'$, and Tatta in $24^{\circ} 20'$; which places are commonly taken at $29^{\circ} 55'$, and $24^{\circ} 40'$.

to the road by land. When these three rivers are united, they form a stream equal to the Indus itself, at the place of confluence; which is from 20 to 30 miles below Moultan.

The fourth river is the Beyah, anciently called *Beypasha*, and is the *Hypbasis* or *Hupbasis* of Alexander; being the next in succession to the *Hydراoetes*, or modern Raujee: and the fifth is the Setlege, Suttuluz, or Sutluj. This last river, about midway between its source and the Indus, receives the Beyah, and the collective stream takes the name of Kera; after which, they do not mix their waters with the other rivers of the Panjab, but join the Indus, in a separate stream, a great way to the south of Moultan; while the other three rivers pass in a collective stream on the north of Moultan, and close under it. Ptolemy names the last river of the Panjab (going eastward), the Zaradrus; Pliny, the Hesudrus. Arrian has the name of Saranges among his Panjab rivers; and says that it joins the Hypbasis (or Beyah). The Ayin Acbaree says that its ancient name was *Sbetooder*; from whence we may easily trace Setlege, or Suttuluz. Before it is joined by the Beyah, it is a very considerable river, and is navigable more than 100 miles. About 24 miles below the conflux, a separation again takes place,* and four different streams are formed; the northmost, and most considerable of which, recovers the name of Beyah; and is a deep and rapid river. The others are named Herari, Dond, and Noorney: and near Moultan they unite again, and bear the name of Setlege, until both the substance and name are lost in the Indus, about 80 miles, or three days sailing,† by the course of the river, below the mouth of the Chunaub. It is owing to the separation that takes place, after the first confluence of the Beyah and Setlege, I apprehend, that so many names are given to the latter, by modern as well as ancient authors: which names, applied by the natives to their respective branches, have, by Europeans, or

* Ayin Acbaree.

† Missionary's itinerary.

others, who were ignorant of the circumstances, been supposed to belong to one principal river only. The Persian map of the Panjab, and Sherefeddin's History of Timur, take notice of only one branch, besides the Beyah (whence one would conclude there were only two principal ones), and this second river is named Dena: possibly the same meant in the Ayin Acharee, by the Dond.

The sources of the Setlege and Beyah, are, like those of the other rivers of the Panjab, situated in the great chain of snowy mountains, that extend from Sirinagur to the north of Cashmere; and which are in fact the true IMAUS; or, at least, the mountains to which that name was first applied by the ancient geographers. The Ayin Acharee tells us, that the Setlege rises in the mountains of Gahlore, or Cahlour; a district which has Bullauspour for its capital: and the Beyah in the mountains of Keeloo, the position of which I am ignorant of.

In tracing the general courses of these rivers, I have derived considerable assistance from the Persian MS. map of the Panjab (so often quoted): it was drawn by a native, and preserved in the archives of government in Hindoostan. The names were obligingly translated from the Persian, by the late Major Davy, at the request of the late Sir Robert Barker. The tract, of which this map serves as a ground-work, includes the whole soubah of Lahore, and a great part of Moultan proper. The points of Lahore, Attock, and Sirhind (the fixing of which, I have before given an account of) determine the scale of the map: the intermediate distances from place to place in it, being given in writing, and not by a scale.

I consider this MS. as a valuable acquisition; for it not only conveys a distinct general idea of the courses and names of the five rivers; but, with the aid of Capt. Kirkpatrick's MSS. and the notices in the Ayin Acharee, sets us right as to the identity of the rivers crossed by Alexander, during his famous expedition into India; of which more will be said hereafter.

The town of Adjodin, often mentioned by Ferishta, and Sherefeddin, is recognized in the MS. map, by the circumstance of its containing the tomb of Sheik Furid, which was visited by Timur. In the map it is called *Paukputton*; but it perfectly answers to the position of Adjodin, as described by the above authors; and is a point, on the fixing of which a great many others depend. Its identity is also confirmed by Capt. Kirkpatrick.

The materials which I have made use of, in forming the detail of the Panjab, are so many, and so various, that it would require too much of the reader's time and patience, to attend to the discussion of all the points that are established by them. And as I have ventured to dilate on the important positions, on which the scale and dimensions of the tract rested; the less important ones must necessarily be dispensed with. Certain points, however, on which the eastern boundary of the tract depends, it will be necessary to touch upon: with which, and some new matter relating to the country of Joud, &c. I shall close my account of the geography of the Panjab.

The eastern boundary of the Panjab, is properly the ridge of snowy mountains (the true *IMAU*s) from which its rivers spring: but in a more limited sense, and particularly according to the ideas of the present times, the Panjab means the country situated *without*, or to the west of the hilly tract; and which is of considerable width, being possibly from 50 to 60 miles from the edge of the plains, to the summits of the highest mountains. And the idea of the Panjab was, I believe, never extended northward, beyond the hills of Bernber, and the borders of the Ghickers.

Mr. Forster, who travelled through the hilly tract abovementioned, has not only contributed some materials towards the elucidation of its geography, but has thrown much light on the loose materials contained in Bernoulli's first volume, and on several particulars in the MS. map of the Panjab, and in that communicated by Col. Polier. The width of the space between the great road

to Lahore, and the first line of hills, together with some positions situated within them, is collected from the following authorities.

Kullanore, on the Rauvee, is 35* cofses above Lahore, in the Panjab map; 59 from Rahoon, in Bernoulli. Rahoon itself is 74 from Lahore, 29 from Sirhind, 9 or 10 from Fulwar Gaut. Kullanore will then stand about E 30° N from Lahore, distant 35 common cofses. It determines also the general course of the Rauvee, above Lahore; which will be found to be nearly the same as from Lahore to Toulumba; the whole country being level, from Kullanore, downwards.

By the help of this general course of the Rauvee, we collect a position in Mr. Forster's route, in this quarter. He crossed the Rauvee at Bissooly, a principal fort, lying at, or near, the entrance of the hills, 42 cofses S E from Jummoo. Bissooly does not appear in the Panjab map; but Adeenagur, a place 40 cofses from Lahore in that map; 42 in Polier's; does. Behaungur, called also Bungurry, a point in Forster's route, 4 cofses S E of Bissooly, appears also in the Panjab map, at about the same distance to the N E of Adeenagur. Hence we have the general position of Bissooly; which we place on the N bank of the Rauvee, 6 or 7 cofses above Kullanore, or $41\frac{1}{2}$ above Lahore; or, in other words, about 59 G. miles E 30° N from Lahore. And the distance is further confirmed by the MSS. of Capt. Kirkpatrick, and by Bernoulli: for, according to the latter, Shahpour is 7 cofses above Bissooly, and on the Rauvee: and from the former we learn, that Shahpour is synonymous with Rajepour, from whence the *Shab Nebr* canal was brought; and which is known to be $48\frac{1}{2}$ cofses from Lahore.

Here then we have an important geographical point settled with respect to Lahore, and Sirhind: and by which, on the one hand, we fix Jummoo, which is 42 cofses from Bissooly, by Forster's

* This, and other numbers, are written on the map.

account (40 by Bernoulli's); and 50 from Lahore, in the map of the Panjab. Jummoo stands then about N by E from Lahore; and Sealkote is 10 cosses from it, towards Lahore: and as Sherefeddin reckons 33 cosses between Jummoo and the Behut river; and Kirkpatrick, 4 marches between Sealkote and Jhulum; the position of Jummoo will be found of the greatest use in fixing the angle of the road between Lahore and Attock.

Noorpour is the next point, situated 12 cosses S E from Bissooly, by Forster's account; 10 from Shahpour, in Bernoulli. This town is the capital of a district of the same name.

Another principal point is Ray Gaut, or Raypour, a remarkable pass on the Beyah river. This place in Col. Polier's map, stands 24 cosses north-eastward of Sultanpour; $25\frac{1}{2}$ from Jallindhar.* And by Forster, it is 19 cosses from Noorpour: but as 2 of these cosses were at a great angle with the rest, 17 or 18 may be taken.

Ray Gaut is situated a considerable way within the level country of the Panjab: for Mr. Forster's party, for security, left the great road of Cashmere, which leads from Bullauspour, through Nadone, and Hureepour, to Noopour; and struck to the left, or S W, from the neighbourhood of Nadone; thereby tracing the south bank of the Beyah, from that place to Ray Gaut. To regulate the direction of this line; and of course to fix Nadone, and Hureepour, and eventually Bullauspour, and Nagorkote; we have the following *data*:

Bejwara, called also Hoshearpour, is 9 journies (perhaps 36 cosses) from Sirhind (Bernoulli); and 16 cosses N E of Jallindhar (Polier); so that it may be about 25 G. miles N of Rahoon. Rajapour is 10 cosses N, or N by E, from Bejwara; 30 from Roopour, towards Jellamooky, the temple built over the subterranean fire near Nagorkote. Hureepour is 11 cosses beyond Rajapour, on the same road; Jellamooky 6 or 7 farther. All these

* Jallindhar is a known position, 48 G. miles from Sirhind, and 13 to the right of Na-kooder, on the Lahore road.

particulars are from Bernoulli: and we collect from them, that Hureepour is 21 cofses; or about 30 G. miles from Bejwara; 84 from Sirhind. And by means of *Seba*, a fort in Mr. Forster's route, and noticed also in Bernoulli, we find that Hureepour must stand 23 or 24 cofses from Ray Gaut; which, with the distance from Sirhind, will fix its position. For Seba is 18 cofses, east northwardly, from Ray Gaut; and 7 south west, or SSW, from Hureepour. Bompal, in Forster, is 15 cofses to the eastward of Seba: and Nadone, a town on the Beyah, about 3 miles to the NW of Bompal.

Seba appears to be the Siba of the old maps, and the capital of a district of the same name; and may have been succeeded in that capacity, by Nadone.

Kote Kangrah, the fortrefs belonging to the famous temple of Nagorkote, is given at 49 royal cofses, equal to 99 G. miles, from Sirhind (northward). Purchas, Vol. I. p. 438, says, that it is 80 (common) cofses from Lahore, which is probable.* Bernoulli says, it is 50 cofses from Jummoo; which can only be true, if meant for royal cofses. Bernoulli reckons Jellamooky 6 or 7 cofses from Hureepour: and Kangrah 7 from Jellamooky; which is probable. And it would appear that Jellamooky should lie NE from Hureepour; SSW from Kangrah.

Mr. Forster estimated the course NW, from Bullauspour to the camp of the Kangrah troops; and the distance 26 cofses: and from thence 10 more cofses, very circuitous, and perhaps only 6 in direct distance, westward, to Bompal; which we have stated to be 3 miles SE of Nadone. This is, however, but poor authority for placing Bullauspour; and Bernoulli only says, that it is about 3 journeys from Roopour (a well known point, on the Setlege) through Nalagur; and this latter is 12 cofses of the way, from Roopour. This would place it 51 G. miles, of direct distance,

* The Persian M.S. map of the Panjab, places Kangrah about N NW & W from Nadone; and Jellamooky midway between them.

from Roopour; $67\frac{1}{2}$ from Sirhind: but the country being exceedingly mountainous, the direct distance is probably much less. Foster's distance from Bompal might give 46 G. miles of direct distance, in a country less rugged; but here, perhaps, only 40 or 41. The Panjab map allows $\frac{2}{5}$ parts in 5, of the distance between Nadone and Jummoo, for that between Nadone and Bullauspour; which produces 44 miles: and it is probable that the 3 journeys from Roopour may only produce as much; and then Bullauspour will stand about N 26° E, 60 G. miles from Sirhind. And in order to this, we must suppose the Setlege to take a SW course within the hills (as all the maps indeed represent); and it is highly probable that it should run off at right angles with the direction of the mountains, which rise above one another, ridge behind ridge.

We have no materials with which we can fill up the lower parts of the Panjab, in the intervals between the rivers. From the Setlege to the Jhulum, and to the hills that bound the Panjab, on the N and E, it appears to be chiefly a tract of flat and very fertile land: indeed, the courses of the four eastern rivers very plainly indicate a regularity of surface, and sameness of soil. But between the Jhulum, or Behut, and the Indus, there is a large proportion of hilly country, which may be supposed to influence the course of the Jhulum, and give it so different a form from the others; the river conforming to the border of the hilly tract.

The geography of this hilly tract, of which Capt. Kirkpatrick has transmitted a particular account, I had misconceived, when I published my first edition; for the Joud mountains, or rather hills, which compose a principal part of it, I had supposed to lie to the *north* of the upper road to Attock; whereas they evidently lie to the *south* of it. And this occasioned me to mistake the pass over the Indus, by which Tamerlane entered and returned from Hindoostan; as I shall make appear to the reader, when I take up the subject of that conqueror's progress.

Capt. Kirkpatrick quotes the commentaries of the Emperor Ba-

ber, to prove that the Joud hills are those which extend from a point on the Behut, 7 coses N of Bheerah (which we have placed at 60 coses W, a little north from Lahore, page 87), to the territory of the Ghickers, a little N of Rotas; that is, near 70 G. miles along the west side of the Behut; for Baber, who crossed the Behut, a little above Jhyulum, is said to have passed beyond (or to the N E of) the Joud hills, in his way from Pirkala to Sealkote. Baber also distinguishes a second ridge of hills, 7 coses west of the Joud ridge, which were occupied by the Jajoohah tribe (descended from the same stock as the Joudis): and this ridge, he observes, joins, or approximates on the one side, to the Cashmere hills; and on the other extends to Wesunkote, on the Indus. Both these ridges are marked on a Persian route in the Panjab, as extending from the Behut to Diga Serai; and both are also designed in the Panjab map. The Jajoohahs extended westward to the river Sohaun,* in Baber's time; and this emperor observes, that although the hills that lie between Bheerah and the city of Nilab, were occupied by various tribes; yet, "that mountainous tract had obtained the general name of Joud." He remarks also, that the continuation of the hilly tract in question, which joined to Cashmere, was held by the Ghickers: and as Pirkala, 3 marches N, or N W of Bheerah, was the residence of one of their princes, it is certain that the Ghicker territory must have extended from Cashmere to the second ridge of hills mentioned by Baber; which would carry this territory, in some places at least, considerably to the south of the upper road to Attock.

It may be expected that the boundaries of the Joud and Ghicker territories fluctuated very considerably, not only during the invasions of Hindooostan, from the north (which these tribes often favoured; they being by nature and by situation, particularly the Joudis, capable either of favouring, or of obstructing such inva-

* This is one of the smaller rivers of the Panjab, and takes its course between the Behut and Sinde. It will be found in the map, together with several others, which were deemed too unimportant to merit a particular description in the Memoir.

sions), but even at ordinary times; and therefore it would be vain to attempt drawing a line of boundary between them. It is, however, clear, that the Ghickers inhabited the northern and largest division of the hilly tract, situated between the Behut, the Sinde, and Cashmere; and the Joudis the southern and least division: and we find also, that the latter division terminated at a few coses N of Bheerah.

What the nature of the country may be on the S and S W of Bheerah, we are not told. The Panjab map marks no hills on the S of Kooshab, which is 10 or 12 coses below Bheerah: but by the description of the conflux of the Behut and Chunab, which is a great way to the S of Kooshab, the soil in that part is rocky: which implies that the new-made land does not extend far into the tract between the Behut and Sinde.

We may remark, that the inhabitants of this hilly tract (meaning both Joudis and Ghickers, or their predecessors), have generally sided with the invaders of Hindooostan at large; considering their own rugged and sterile country only a passage to the other. They invited Alexander, and they appear to have invited Humaioon: and they rather favoured the progress of Tamerlane, and others. Probably, from the nature of their country, they have ever maintained a sort of independency of the Hindooostan emperors, excepting in the most vigorous periods of their government. How they stand with respect to the Seiks, and Abdalli, at present, I know not: but in Col. Browne's List of Residencies of the Chiefs of the Seiks, I perceive only a single one, that is Rotas, in this tract.

By the help of the Persian and other MS. maps, particularly a map of the Panjab,* obligingly communicated by Colonel John Murray, Commisary General to the army in Bengal, I have been enabled to give the road from Vizierabad to Yehungsaul (or Je-

* The map in question, was drawn by Lieut. Rind, of the Bengal establishment; as well as that of the roads in the Dousab, mentioned in page 66.

hung-salan), through the Retchna Doabah, with many other positions in and about the Panjab. The road from Jummoo to Berouja, &c. is from Sherefeddin's Timur. Debalpour is known to be on the great road from Delhi to Moultan: and the divisions of the country in the Ayin Acbaree, point out its situation to be far down the Setlege, in the Jallindhar Doabah.

Although we have the dimensions of the Panjab country, in a tolerably satisfactory manner, from N W to S E, both in the aggregate, and in particulars; yet we have not the means of determining its breadth from north to south; or rather, from Lahore to the Setlege. The first junction of the Beyah and Setlege, is stated by the Persian map, at 63 cofses below Ludhana; but we are left to guess the cross distance from Lahore, unless what is said in the same map be true, that it is only 18 cofses from Lahore to Kussoor, and also that Kussoor is on the banks of the Setlege: but this is highly improbable from other circumstances; in particular, that the same Persian map allows a greater space between the Rauvee and Setlege, than between the Rauvee and Chunab; and that Ferosepour, at the conflux of the Beyah and Setlege, is reported by Capt. Kirkpatrick, to be 90 cofses from Lahore. Col. Murray's map places Kussoor on the Beyah, and not within 25 cofses of the Setlege. The marches of Timur across the lower parts of the Panjab, afford but a faint light to guide us, such as days' marches; and those in an oblique direction.

THE geography of the Panjab country, as being, comparatively, of little consideration in a map of such extent, has been detailed much beyond its seeming importance. The reason is, that we are not likely, as far as I can judge, for a great length of time, to be possessed of any better materials than those I have exhibited; indifferent as they may be, in many instances: and therefore I con-

sider it as the finishing stroke to the whole matter, for some time to come. And if any good materials do cast up, such as the latitudes and longitudes of some principal points, or some measured routes; I shall, I flatter myself, have prepared the ground for the erection of a fabric of a better construction. The Panjab country being the frontier province towards Tartary, and the northern parts of Persia, from whence have sprung the conquerors of Hindoostan in every age, Alexander alone excepted; it follows, that their route to the interior parts of the country, must have led through it. Of all these conquerors, as far as I can learn, the routes of Alexander, Timur (or Tamerlane), and Nadir Shah, are the only ones that have their particulars on record.* Timur's route I have already in part given, as it was interwoven so closely with the geographical construction, and towards which it furnished a considerable proportion of materials; and the remainder will be given. Nadir Shah's route was the ordinary one, by Attock and Lahore; and he returned, as appears by Abdul Kurrim, and M. Otter, by nearly the same route; save that instead of crossing the Indus at Attock, he went higher up, and passed the borders of Sewad, in his way to Jalalabad and Cabul. Unfortunately for geography, no detail of this part of Nadir Shah's route has yet appeared: for was it particularized, it might throw much light on the geography of Sewad, and Bijore; and might also explain some circumstances respecting the courses of the rivers in that quarter, which now remain in uncertainty.

The particulars of the marches of the late Acmet Abdalla (King of Candahar), during his frequent visits to Delhi, in the present age, have not come to my knowledge. Alexander's route then is the only one that remains to be mentioned; and although last

* Turmehirin Cawn, a descendant of Gengis, or Zingis Cawn, made an irruption into Hindoostan about the year 1240; but the particulars of his route are wanting. Sheretdin mentions, in one place, that he crossed the Chamb at Tonlumba; and in another, that he besieged the city of Merat in the Doobab. But Ferishta confines the exploits of this descendant of Gengis, to the Panjab country.

in point of order, here, is to be considered as the first, as it respects history, and the gratification of popular curiosity: and therefore, of course, merits a particular and pointed discussion.

I shall now proceed to trace the route of Timur, or Tamerlane, chiefly from his history, written by Sherefeddin; and illustrated by the observations of Capt. Kirkpatrick.

In order to fix the situation of the pass over the river Indus, by which this conqueror entered Hindoostan, and returned from it (for it is evident by the history, that he came and returned by the same pass), it will be necessary for me to anticipate the description of the roads leading from Cabul, and other places in that quarter, to Hindoostan; a subject which properly belongs to the description of the countries on the west of the Indus; but which can never be introduced with more effect, or more to the reader's advantage, than in this place; where it will serve to illustrate at once, the account of the progress of Timur, and of Alexander.

The country of Cabul, in respect of its natural geography, is divided into two parts, separated by a ridge of very high mountains, usually covered with snow, which runs from west to east, from the neighbourhood of Ghizni, to that of Deenkote on the Indus, below Attock. The tract lying to the north of this ridge, is named Lumghan (or the Lumghanat); and that on the south Bungush (or the Bungushat): each having one or more considerable rivers intersecting their whole length, and disengaging themselves into the Indus. That of the Lumghanat, is the river of Cabul, called also the Kameh, and in its lower part the Attock: and that of the Bungushat is the river that passes by Nughz, and Bunnoo, and whose proper name I am as yet uninformed of. Each tract has also its proper roads, and its passes over the Indus, from the districts of Cabul, Candahar, and Ghizni, respectively: but the northern, or Lumghanat road, is the one in common use, whether to Persia, or Samarcand, notwithstanding its circuitous nature, as it respects the former of these countries; for it is both the easiest and the safest.

Not to enter too much into detail, I shall only mention the principal of these communications.

1st. The upper, or Lumghanat road, between Cabul and Lahore, passes through Paishawur, and crosses the Indus at Attock. This, which is named the KING'S ROAD, is the most practicable for armies, and the safest for caravans and travellers: and is accordingly, as we have said before, the most in use.

2d. Kherpeh, which appears to be only a branch of the former, separating from it at Jalalabad. It is not sufficiently particularized, to enable us to understand its entire course.

3d. The *upper* Bungushat road, which crosses the Indus either at Deenkote, or Reishi: and leading to Cabul by Bunnoo and Nughz: and to Lahore by Bheerah. The positions of Deenkote, and Reishi, I am not enabled to fix with precision; but am led to suppose that Deenkote is from 30 to 35 G. miles below Attock; and Reishi, a very few miles above Deenkote. The great ridge of mountains just mentioned, lies immediately between these passes and Attock; and shuts up the communication between the Bungush and Lumghan roads, as far as respects the commodious, or safe passage of an army: for the heights of SINDIA BUSTEH, which are described as steep, craggy, and tremendous, are to be crossed between Deenkote and Paishawur, by those who would go from the former, to Cabul. A better way is by following the course of the Bungush road, through Kohaut, Bunnoo, Nughz, and Irjab; and this way Timur came. Kohaut I find in Bernoulli (Vol. I. p. 70) at 12 colses from Paishawur; and it is also four marches from Reishi (Kirkp. MSS.).

How far the snowy ridge extends westwards, I know not; probably it sinks in its progress that way; as, although mention is made of it in Timur's march from Cabul to Nughz, yet it is not represented as forming an obstacle to the progress of his army. Its position in that quarter, is marked by the march of Timur, and by the circumstance of Irjab being in the Lungan division; Shenuzan, in that of Bungush. What direction the ridge afterwards

takes, we know not; but it does not cross the line of the road between Ghizni and Candahar. Probably it passes on the south of Candahar, and forms the height named Suhmandroog; which occurs in the march of Dara Sheko, at 45 G. miles to the S E of Candahar: in which case, it answers to the chain of mountains described by Ptolemy under the name of *Parveti*; and as the southern boundary of the province of *Paro-pamisus* (*Asia, Tab. IX.*).

The 4th, is the *lower* Bungush road, which crosses the Indus at Chowpareh pafs, 25 to 30 G. miles below Deenkote; or perhaps 60 below Attock. This route also leads to Lahore through Bheerah; to Ghizni and Cabul, by Fermul (which lies S E from Ghizni, S from Cabul); and to Candahar, by the DESERT. When we consider the existence of the desert in question, and the mountains, wilds, and dreadful torrents, that occur in the Bungush roads, we are no longer at a loss to know why the road by Attock and Cabul, to Candahar, and Persia, in general; though circuitous, obtains the preference. It was in use even in Tavernier's time, when the Mogul government was in its vigour. To the above obstacles, we may add, *that* arising from the presence of certain fierce Afghan tribes, which occupy the country in the line between the Panjab and Candahar; and which have never continued long enough under a course of subjection and civilization, at any one time, to enable them to retain any traces of the latter, after the subjugation had ceased.

These are all the great communications, which apply to our present purpose of describing the route of Timur from Cabul towards Hindooostan. According to Sherefeddin, he went by way of Irjab, Shenuzan, Nughz, Banou (or Bunnoo), and thence to the Indus, at the very place where Gelaleddin, King of Karasm, fought with Gengis Cawn; and so heroically swam the river, after his defeat, in 1221.

This account of his progrès admitting of no doubt, as to the general facts; and the description, bearing, and tendency, of the

pases over the Indus, and the nature of the countries they lead through, coming from the pen of the Emperor Baber; whose local knowledge in those parts was very considerable, as being obtained by long experience, at the head of armies: and as the snowy ridge of mountains lay between Timur's route to Bunnoo, and Attock; and being unnoticed by the historian, was certainly never crossed by Timur (nor could any ordinary reason have induced him to take so circuitous a route, through exceeding difficult roads): I say, taking all these circumstances into consideration, we can have no doubt that Timur crossed the Indus on the south of this ridge. That Gelaleddin crossed it there, is clearly inferred from the course of his march from Bamian to Ghizni, and thence to Gurdaiz,* all of which places, point towards the Bungush road, and not to that by Attock: and it is unquestionable that Gelaleddin and Timur crossed the Indus at one and the same pass, for Sherefeddin positively says so; and this pass can be no other than Deenkote, or Reishi.

The arrival of Timur in the district of Joud,† when he had crossed the Indus, is, according to Baber's account of the geography of Joud, an additional proof that the pass lay far below Attock.

And now that the geography of the Panjab is so far improved by Capt. Kirkpatrick's communications, we may with certainty conclude, that Timur returned from Hindooostan by a route below Attock. We trace him from Delhi to Jummoo; from whence, after 33 coises of road, he came to the river Behut, or Jhulum, near Jubhan, or Gebban; and pursuing the course of the river 20 coises, he came to Sambaste, *situated within the mountains of Joud.*‡ This is a clear indication of his having turned to the south, from Jummoo: for had he gone 20 coises upwards on the Behut, after

* Capt. Kirkpatrick informs us that Gurdaiz (probably the Kerdiz of Sherefeddin) was a point in Gelaleddin's retreat from Ghizni: also that the name of the rock in the Indus, nearly opposite to Attock, has no reference to Gelali, or Gelaleddin.

† Sherefeddin.

‡ Ibid.

falling in with it, at a point 33 cosses from Jummoo, he would have been advanced into the northern part of the GUICKER territory, instead of being in that of Joud. The circumstance of his crossing the desert of Gelali, both in coming, and in returning; (that desert commencing near the place where Gelali, or Gela-leddin, crossed the Indus), is also in proof of my supposition. The positions of Jubhan, Sambaste, and Berouja, cannot be recognized in the present geography; but that of Berouja must fall very near to Pirhala, if it be not meant for the same place.

Timur's first object after crossing the Indus,* being to effect a junction with the army of his grandson Peer Mahmud, which was then besieging Moultan, he directed his course that way, instead of taking the common road to Delhi, by Rotas and Lahore. The neighbourhood of a navigable river being a desirable object to an army which was marching through a dry sterile country, he pushed for the nearest part of the Behut, or Jhulum river, where he attacked and took the fortress and island of Sheabadin Mobarick.

Sherefeddin allows only two marches between the Indus and the Jamad, or Behut;† but it cannot be less than 6 marches from the Indus to the Behut, and therefore there must be an error in the statement of the time. Between the time of passing the Indus, and the arrival at the conflux of the Behut and Chunaub, 12 days elapsed; that is, from the 19th, to the 24th of Moharrem; and as it may be about 10 marches from Deenkote to the conflux, by Timur's route, here is an interval of 2 days more than the march required; which might have been employed in the reduction of Sheabadin's fortres, &c. Perhaps the date of Timur's arrival at the fortres, instead of the 14th of Moharrem, should have been the 18th.

A fortres, not named, stood on the west side of the conflux of the

* October 11, 1398. The chronology of this event is differently stated: I have followed M. de la Croix's translation.

† Sherefeddin, in his description of Cashmere (Vol. II. chap. xxxi. of his History of Timur), applies the names of Jamad and Dindana, to the Behut.

Behut and Chunaub rivers; and just below it, Timur threw a bridge of boats over the confluent waters. This junction, we have observed elsewhere, is accomplished with great violence and noise; and Sherefeddin says, that the waves dashing against one another, make it appear like a troubled ocean: for such large rivers, pent up within strait rocky beds, form a rapid and troubled stream at their meeting. A like description of it is given by the historians of Alexander; which, together with the concomitant circumstances of general position and connexion, render this conflux a most unequivocal point of reference, in the comparison between the ancient and modern geography.

Timur made only one march between the conflux and Toulumba: and as he did not bring the army with him, but left it crossing the river, it may be inferred that the march was not a short one; and therefore I allow 20 road miles for it, in a S E by S direction; that being the position of Toulumba from the conflux, by the above construction. According to Sherefeddin's manner of writing, one could hardly be certain whether Toulumba was on the side of the Rauvee, or the Chunaub. Ferishta has placed it on the latter, erroneously; for the missionary above quoted, came down the Rauvee, and passed by it; moreover, giving its latitude at 15° north of Moultan, though it is probably 25°. This is a considerable town, and a pass of consequence, on the Rauvee; and often occurs in Ferishta's History of Hindooostan. It was in the neighbourhood of this place, that Alexander made war on the Malli, or people of ancient Moultan; as will be taken notice of in its place. Timur staid here 6 days, and then proceeded with the whole army across the Baree Doabah, to Shahnawaz (or Shannahas), a large and populous town near the north bank of the Beyah, after its separation from the Setlege. Here he found more grain than his army could consume; whence we may infer the fertility of the country, which is low and flat, and subject to periodical inundations, like Bengal. Sherefeddin describes at this

place, a deep lake, fortified round with a wall, and defended by 2000 men; which reminds one strongly of something similar at *Sangala*, which Alexander attacked, before he reached the *Hyphasis*; but the hill, which was fortified round with carriages, is wanting: and Shahnawaz is 90 G. miles from Lahore, whilst Sangala was only 3 marches, that is, less than 40 G. miles from the place where the *Hydraotes* (*Rauvee*) was crossed; which is supposed to be at the place where Lahore now stands.

It was something more than 2 marches from Toulumba to Jenjian, a town on the south bank of the *Beyah*, opposite to, and not far from Shahnawaz. As Timur's army was 3 days in passing the *Beyah*, some in barks, and others by swimming, it may be reckoned a considerable river.

At Jenjian, Timur staid 4 days, and was joined by Peer Mahmud, who had by this time taken Moultan. Timur's next station is Jehaul, 3 marches from Jenjian, on the road to Delhi: and here he separated from his grand army, which he directed to proceed by Debalpour, and to rendezvous at Samanah, a town 85 cosses on the west of Delhi; whilst he proceeded with 10,000 horse to Batnir, a strong fortress about 70 cosses from Jehaul, and far to the right of the Delhi road; being beyond the desert which stretches along the south side of the Setlege. He was led to this place, from resentment, at its giving protection to the people of Debalpour, who had massacred a garrison placed in it by Peer Mahmud: and possibly the great reputation it had for strength, might be one inducement to undertake the siege of it; as Aornos, in like manner invited Alexander.

Timur, after leaving Jehaul, proceeded the first day to Adjodin, or Pauk-putton (of which we have spoken before), a town included in one of the large islands formed by the branches of the Setlege: here he visited, and spent some time in devotion, at the tomb of Sheik Furrid (see page 104), and then set forward for Batnir; which is stated, by Sherefeddin, at 60 cosses from Adjodin: 50 of

which, equal to about 95 B. miles, Timur is said to have marched in one day and night only, with a view to surprise the place.

On the south-east of Adjodin, a few coses, he crossed the river Dena; which I take to be one of the four branches of the Setlege (possibly the Dond), and perhaps the only principal one among them, except the Beyah, already noticed.

It must not be omitted, that Timur crossed an extensive desert in his way to Batnir: I mention this particular to shew that Alexander was not misinformed, when he was told that there was a desert beyond the Hyphasis.* After taking and destroying Batnir, which employed only a few days,† he marched on the 30th of November, taking a very circuitous road to Samanah; where he joined his grand army on the 8th of December, 1398. It is not easy to collect the distance, from Sherefeddin's account of the marches; and no rule can be applied to the marches of a party of horse, as to those of an army in general. For certain points in the march of Timur, between these places, see pages 76 and 77.

His march from Samanah to Delhi, about 85 coses, appears to have taken up 12 days; whence we may collect, that the common marches of his grand army, were about 7 common coses each day; or about $13\frac{1}{2}$ British miles by the road.‡

* Quintus Curtius.

† Barnir is represented as a very strong place, and yet Timur is said to have taken only a body of horse with him (and indeed the extraordinary length of one of his marches seems to prove it).

‡ The mean length of the marches of great armies, is more susceptible of rule; and, of course more useful in its application to geographical purposes; than may be at first imagined. I shall here mention the results of my inquiries concerning Indian armies only; that being the point to my purpose. The mean of 95 marches, where the measured distances are given, is equal to 14.6, or about $14\frac{1}{2}$ B. miles (that of European armies in India is considerably less). These $14\frac{1}{2}$ miles of road distance, may be allowed to produce 11 G. miles of direct distance, when applied to geography, on lines of considerable extent: although each individual march might produce half a mile more, by the compound winding being laid out of the question (see page 6 and 7).

The march and retreat of the Greeks from Nauliz to Trebizond, give, at a mean, only 15 British miles for each march; reckoning Xenophon's parasangas at 3 Roman miles (as M. D'Anville does, in his *Mes. Hds.*); and, it is pretty evident, both from the space marched through, and from other circumstances, that his number of parasangas is taken too high.

On his return, he made an excursion to the north-east, into the Dooab, took the city of Merat (called Mirte by De la Croix), 23 miles from Delhi, and advanced to the Ganges, near the place where it issues out of the Sirinagur mountains. Toglocpour, and the straits of Coupele, two places of victory on the eastern bank of the Ganges, cannot now be recognized: but from Sherefeddin's account of the march, they cannot be far from Loddong; where the British army completed their campaign in 1774, 1100 British miles from Calcutta.*

From the banks of the Ganges, he proceeded to the north-west, along the foot of the Sewalic mountains, by Meliapour, Jallindhar, and Jummoo, to the Indus, which he crossed at the same place as before, and in the same manner; and returned to Samarcand by way of Bunnoo, or Banou, Nughz, or Nagaz, Cabul, Bacalan, and Termed.

I come now to the subject of Alexander's route, through the countries on the east of the Indus; where alone I can follow him with any degree of certainty: and this certainty may be ascertained by tracing his route either way, from the celebrated conflux mentioned in page 118. I take it for granted that he crossed the Indus, † at, or near the site of Attock; because, as we have seen in page 114, it is the pass leading from the quarter of Cabul and Bijore: from whence Alexander came; as will be shewn when we discuss the geography of the countries of India, lying west of the Indus. The fortress of Attock was built by Achar, to command this pass; which is so confined, either by the nature of the banks, or of the channel of the river, or both, that the passage from the

* As the time of Timur's conquest (1398) the British nation had scarcely been announced to the people of Hindooostan; nor was it till 200 years afterwards, that they found their way thither. Who could have believed that the British conquests would meet those of Tamerlane, in a point equidistant from the mouths of the Ganges and Indus, in 1774?

Capt. Kirkpatrick informs us, that a place named *Calpee*, occurs in Abdul Hameed's account of an expedition to the borders of Sirinagur, near the place where the Ganges issues from the mountains; and which he supposes may be the place meant for Coupele in Sherefeddin. In some MS. maps in my possession there are two small rivers named *Cobz* and *Pecly*, which descend from the hills on the east of Hurdwar. Qu, if the confluent streams be not the *Coupele*, or *Cobz-Pecly*, of the historian?

† About 327 years before Christ, according to Usher; and in the month of May.

landing-place leads through the very fortress itself.* As soon as Alexander had crossed over to Taxila, † on the east side, Ambisares, king of the Indian mountaineers (the predecessors of the Ghickers, we may suppose), sent ambassadors with presents to him: as the chiefs of the Joudis afterwards made their submissions to Tamerlane, in 1398. From Taxila, as his intention appears to have been to penetrate to the Ganges, he may be supposed to have gone by the ordinary road, to that part of the bank of the *Hydaspes* (Behut or Jhyulum) opposite to the place where the fortress of Rotas now stands; and here he put into execution his stratagem for crossing the river, while the opposite shore was possessed by Porus. It might admit of a doubt whether Alexander came by the way of Rotas, or by that of Bheerah, did not the length of the voyage down the *Hydaspes*, to the conflux of the *Acesines* (after his return from the *Hyphasis*), seem to prove that the fleet was constructed at a greater distance than 48 G. miles, above the conflux. The fleet was five days in dropping down with the stream. Hephestion and Craterus were dispatched by land, previous to the sailing of the fleet; and were overtaken on the third day of the voyage: nor did they afterwards arrive at the conflux, till Alexander was returned from his first expedition to the confines of the Malli. It may be 11 days march from Rotas to the conflux: ‡ only, from Bheerah to it.

After Alexander had crossed the *Acesines* (Chunab) and *Hydaspes* (Rauvee), which latter he may be supposed to pass near the place where Lahore now stands, he appears to have been drawn out of the direct route towards the Ganges, to attack the city of Sangala, most probably lying between Lahore and Moultaur; but we are left in uncertainty as to its position, by Alexander's historians, otherwise than by circumstances, and detached facts. The

* Kirkpatrick's MSS.

† Taxila, then, must have stood on, or near to the site of Attock: or at all events, it must have been near the Indus, to allow of its being 120 miles from the *Hydaspes*, or Behut. See the notes, page 51: and also the Indian Itinerary of Piny, in Book VI.

name Sangala, occurs only in Arrian: and is said to have been a city of great strength and importance, in the country of the Cathei. Diodorus Siculus calls the same people *Catheri*, or *Katberi*; and these may very easily be recognized under the name of *Catry*, in Thevenot; that is to say, the *Kuttry* tribe, or Rajpoots. Thevenot speaking of the people of Moultan, says, "there is a tribe of Gentiles (i. e. Gentoos, or Hindoos) here, called *Catry*, or 'Rajpoots; and this is properly their country, from whence they spread over all the Indies.' Diodorus Siculus marks them by the custom of their women burning themselves alive, on the funeral piles of their husbands: which is indeed a custom among them, as well as some other Hindoo tribes, at this day. Now we find by Arrian, that the Cathei were confederated with the Malli and Oxydrace, that is, the people of Moultan and Outch, and which lay to the south-west of the place where Alexander might be supposed to cross the *Hydraotes* (or *Raijee*) in his way into India. (That the Malli were the people of the present Moultan, we can have no doubt, if we attend to the circumstances of the voyage of Alexander down the *Hydaspes*, hereafter.) I find no difficulty therefore, in determining the position of Sangala to be to the S W of Lahore. As to the distance, Alexander reached it the third day after crossing the *Hydraotes*; and we cannot allow more than 48 road miles, for these 3 marches; or 96 G. miles in horizontal distance. Had Alexander's route been S E towards the *Ganges*, the above distance would have brought him within 6 or 7 miles of the *Hyphasis* (the modern *Beyah*), and Arrian says not a word about that river, until Alexander had returned to Sangala from the pursuit of the fugitives, and again set forward on his march. No idea is given either in Arrian, Diodorus, or Quintus Curtius, of the distance between Sangala* and the *Hyphasis*: but it may be collected by Arrian's manner of speaking, that they were not near each other.

* Although Diodorus and Curtius do not give the name Sangala, yet the city meant by Arrian, under that name, is pointedly described by them.

Diodorus places the kingdoms of Sophites and of Phigeus between the Catheri and the Hyphasis; whence we may infer a considerable space between them. If I am right in my conjecture concerning the position of Sangala, the Hyphasis (Beyah) must be about 40 miles from it, eastward; and let Sangala be where it will, the river Beyah answers to the Hyphasis, or Hypasis (called anciently by the natives, Beypasha), and Alexander's altars may probably have been erected between Govendal, and the conflux of the Beyah and Setlege, at Ferosepour; Pliny says on the further, or eastern side of the river. One cannot help regretting the extreme brevity of this part of Arrian's narration, with respect to the detail of Alexander's marches, between Sangala and the Hyphasis, and back again to the Hydaspes; which is dispatched too rapidly for a geographer to profit by. Diodorus and Curtius are not more explicit; nor indeed, if they had, are they to be much depended on, in this respect; for they have confounded the Hydaspes (Jhy-lum) with the Acesines (Chunaub), in their account of Alexander's voyage. But, I think, whoever takes the trouble to compare Arrian's account, both of the land marches, and the voyage down the rivers, with the geography of the Panjab; will find the ancient *Hydaspes* in the modern Behut, or Jhylum, the first river beyond the Indus; and successively, the *Acesines* in the Chunaub; the *Hydrates* in the Raujee; and the *Hyphasis* in the Beyah; though I will not contend for the exact position of the altars, whether they might be above the conflux of the Beyah, or below it: only the ancient name *Beypasha*, appears more likely to have been the origin of the Greek Hyphasis, Hypasis, or Huphasis; than *Sectoeder*, which was the ancient name of the Setlege.

As M. D'Anville's account of Alexander's progress in the *Antiquité Géographique de l'Inde*, supposes that the Behut (he calls it Genave), the westernmost of the Panjab rivers, was the Indus of Alexander; but it is necessary to observe, that M. D'Anville's opinion was formed on the supposed certainty of that monarch's

having only four rivers, between him and the country of the Prasii, when he had crossed the Indus. That prince of geographers, when he determined this question, had not the true geography of the Panjab before him: and, in fact, Alexander had all the five rivers of the Panjab to cross, after he arrived on the east side of the river, which he supposed to be, and which was in reality, the Indus.

There is a flat contradiction between Arrian and Diodorus (and Curtius who follows the latter), regarding the quality of the country on the east of the Hyphasis; the former describing it as a flourishing and well-inhabited country; the latter say there is an extensive desert between it and the Ganges. Arrian's account suits the upper part of the river, and those of Diodorus and Curtius, the lower part; for there is certainly a desert, as has been before observed, between the Panjab and Batnir.

We are left to suppose that Alexander, after the determination of his army to proceed no further, returned to the Hydaspes, by the route he came; bating the ground he lost in marching after the Catheri; and finding his cities of Nicæ and Bucephala completed; and a fleet, or part of one, built out of the timber procured from the neighbouring mountains, named by them *Emodus*, and *Himaus*, or *Imaus*; he proceeded down the Hydaspes with his fleet, while the greater part of the army marched by land.

Here it may be proper to observe, that Arrian does not say from whence the timber came, but leaves us to suppose that it came from the forests nearest to the river; and enough is known of the nature of the country, to convince us that the forests bordering on the foot of the Cashmerian hills, were very near to the river Hydaspes. The mountains Emodus and Imaus indeed, were at a very great distance, and could be *only in sight* to the N. E.; since they are in effect the mountains which extend from the Ganges, above Srinagur, to Cashmere; separating the dependencies of Hindoostan, from those of Great Thibet. I suspect Emodus and Imaus to be

different readings of the same name; and Imaus or Himaus, we have every reasonable proof, of being derived from the Sanscrit word *Himmaleb*, signifying snowy. That vast ridge bears the same name at present; and Pliny knew the circumstance well.*

It is unlikely that Alexander, so far from visiting Cashmere, as some have supposed, had even heard any distinct account of it; otherwise some of the writers of his life would surely have taken notice of so extraordinary a country: nay, I conclude, according to my idea of Alexander's character, that he would certainly have visited it, when he returned to the Hydaspes, to embark for the Indus; and was, in some degree, at leisure; if a man who is eternally preparing work for himself, can be said to have any leisure.

Alexander sailed from his first place of embarkation in the Hydaspes, about the middle of November N.S. 327 years before Christ (according to Usher), having, of course, been in the field the whole rainy season: for he crossed the Indus in May. In five days the fleet arrived at the conflux of the Hydaspes and Acesines (Jhylum and Chunaub), the identity of which, is most pointedly marked (as we have before observed) by the nature of the banks; and by the rapidity and violence of the stream, which dismayed the whole fleet, and proved fatal to some of the large ships.

At this place, Philip, who had led a division of the army along the banks of the Acesines (whose course is not far from that of the Hydaspes, and gradually approaches it, until they meet), joined the grand army, and was ferried* over the Acesines. We may observe from this, and from Craterus and Hephestion being detached with the other two divisions, along the opposite banks of the Hydaspes, that Alexander might be said almost to sweep the whole country. He now approached the confines of the MALLI, and set out on his *first* expedition with a detachment, against the people of the country bordering on the Malli, to pre-

* *Iminus, incolarum lingua nivoman significante.* *Plin. v. Book VI.*

vent their giving assistance to that nation; but the particulars of his march are not recorded. He returned again to the fleet and army at the conflux of the Hydaspes; and from thence dispatched the fleet to the next place of rendezvous, at the conflux of the Hydraotes (Rauvee) with the Acesines (Chunaub); for so the confluent streams of the Hydaspes and Acesines were named, the Acesines being the largest;* and as the Hydaspes is said to be 20 stades in width the whole way, the other must have been an immense river. The army was now divided into four divisions, three of which marched at a considerable distance from each other; along, or near the course of, the river; the fourth, Alexander took the command of himself, and marched inland from the river to attack the Malli on that side; in order to drive the fugitives towards the forks of the rivers, where they might be intercepted by some of the other divisions. The line of direction of his march must have been south, or south-eastward. On the second morning he took a strong city, and Perdiccas, another; and after a second long night march, arrived at the Hydraotes (Rauvee): perhaps, we may allow for the day, and two night marches, 40 road miles; or 30 G. miles of horizontal distance.† He fell in with the river at some considerable distance above the conflux (the appointed rendezvous for the fleet), as appears by what followed: and after crossing it, took two other towns;‡ and then proceeded to the capital city of the Malli; after dispatching Python back to the river side, to intercept the fugitives. This capital of the Malli, must not be mistaken for the modern Moultan; which is at least 90 miles by land, below the conflux of the Hydraotes; or two days voyage

* It would appear, by the description of the Acesines by Ptolemy, quoted by Arrian, that this was by far the largest of the Panjab rivers.

† The Ayin Achares reckons 27 eastes, or 51 B. miles, between the two confluences of the Hydaspes and Hydraotes with the Acesines; but this account includes the windings of the channel.

‡ One of these was a town of Brachmans, or Bramins. Some of them burnt themselves, together with their houses; and few came alive into the enemy's hands. This mode of conduct has been practised in our own time. See Orme's Indostan, Vol. II. p. 355.

for a boat going with the stream: * but the ancient capital in question, was above the conflux; and near the *Hydraotes* (Rauvee), by the garrison's leaving it, and retiring to the opposite (north) side of the river. Alexander recrossed the river after them; but finding them too strong to be attacked with the party he brought with him, and waiting for a reinforcement, the enemy had time to retire into another fortified city, *not far off*. This *nameless* city, is the place where Alexander was wounded, and in such imminent danger; and not in the capital of the Malli, nor among the *Oxydrace* (Outch), which is on the opposite side of the Acesines (Chunaub), and near its confluence with the Indus. Indeed Arrian is particular in pointing out this error [of Diodorus]. As to the distance of this city above the conflux, we may collect that it could not be very far, both by reason of the quick communication between Alexander, and the camp and fleet; and by the ground he had marched over, after leaving the first conflux. I am inclined to place it about 15 G. miles above the conflux (of the Chunaub and Rauvee), and a few miles from the north bank of the latter; and the capital of the Malli on the opposite side, and not far from the river bank; so that they will be somewhat below the present town of Toulumba, which has been mentioned as a famous pass on the Rauvee, between Lahore and Moultan.

When Alexander was sufficiently recovered from the effects of his wound, he was embarked on the *Hydraotes*, and carried *down the stream*, to his fleet, which appears to have been brought into the *Hydraotes*; for we learn that he passed the conflux after he joined the fleet.†

We learn also, from the same author, that the Acesines preserves its name until it is lost in the Indus, although it receives the Hydaspe and Hydraotes: the historian of Timur, in like manner, gives the name of Chunaub to the confluent waters of the Jhulum

* Itinervy, 1662.

† Arrian.

and Chunaub: this alone, however, does not prove that it was the largest river; for we have many examples, in modern geography, at least, where the adjunct river, though the smallest, gives its name to the confluent waters. It is worthy of remark, that Arrian, as it appears, not knowing what became of the Hyphasis (Beyah) does not say that Alexander *saw* the mouth of it, as he did those of the Acesines and Hydraotes; but only informs us that *it fell into* the Acesines. And indeed, the truth is, that the Hyphasis (or Beyah) does not join the Chunaub; but, after uniting its waters with those of the Setlege, falls into the Indus, a great way farther down. It is certain that the courses of rivers, even of the largest, do alter so much, in time, that what Arrian says might have been the case; but there is no necessity for supposing it.

Arrian, as well as Sherefeddin, informs us that the lower part of the Panjab, towards Moultan, is flat and marshy, and inundated [like Bengal] by the periodical rains, which fall between the months of May and October. As a proof of it, Alexander was once obliged to break up his camp, on the Acesines (Chunaub) and retire to the higher grounds.

From the conflux of the Acesines with the Indus, we accompany Alexander, successively to the territories of the Sogdi, Musicani, Oxycani, Sindomanni, and Patalans. The Oxydracæ, who had submitted by their ambassadors, were left unmolested. Bhakor answers nearest to the position and description of the country of the Musicani, which was next to the Sogdi, and the most powerful on that part of the Indus: and the Oxycani, the next in order, to Hajcan; a circar, or division of Sindy. In Sindomanni we may recognize the country of Sindy; or that through which the river Sinde flows, in the lower part of its course: and Pattala, has ever been referred to the delta of the Indus. But so vast a change of names, or rather so vast a change in the manner of writing them,*

* A comparison of the modern names with the ancient, in many parts of Asia, leads me to conclude, that had they been faithfully written by the Greeks, much less difference would

forbids the building of any hypotheses, on the similarity of ancient and modern names of places; except in cases, where the locality is equally evident.

Having now conducted Alexander across the Panjab, and down the Indus, to the head of its *delta*, it may not be amiss to observe, that the state of the country through which he passed, was very different from what we should have conceived, who have been in the habit of considering Hindoostan, as being governed by one monarch, or even as divided into several large kingdoms. In the Panjab country, in an extent less than is comprised within one of the soubahs, or grand divisions of the Mogul empire, we find no less than seven nations; and along the lower parts of the Indus, many more. Even in the Panjab, where Alexander warred a whole campaign, and part of another, there was nothing of that kind of concert appeared, which must have taken place between the governors of provinces, had they been under one head; but in general each acted separately, and for himself. The Malli, Catheri, and Oxydracæ, we are told, leagued together for their mutual defence; and this proves that they were separate governments. It is curious, that the same cause that facilitated Alexander's conquests in India, should also have given them the degree of celebrity that has ever accompanied them; that is to say, their subdivision into a number of small states: and ordinary readers, either not regarding, or not comprehending, their extent and consequence, have considered them as kingdoms. The conquest of the Panjab and Sindy, would, with such an army,* be no very great matter in our times, although united; and yet this conquest is considered as a brilliant part of Alexander's history: the truth is, the romantic traveller is blended with the adventurous soldier; and the feelings of the reader are oftener applied to than his judgment.

be found between them, than we now experience; and I am inclined to think that the names of the rivers, in particular, are scarcely changed since the time of the Greeks.

* Alexander had 120,000 men, and 200 elephants. Arrian.

But although the western part of Hindoostan was in this state, there existed beyond, or rather towards the Ganges, a powerful kingdom, as appears by the state Megasthenes found it in, when he resided in quality of ambassador from Seleucus Nicator, not many years after, at Palibothra, the capital of the Prasii.* The Prasians probably owed to the discontents that prevailed in Alexander's army, their escape from a foreign conquest at that period.

Alexander arrived at Pattala about the middle of August (before Christ 326 years), and after he had made proper arrangements for the safety and conveniency of his fleet and army, and had viewed also the two principal mouths of the Indus, in which he experienced some degree of surprise, if not of terror, from the bore, or sudden influx of the tide;† he departed by land for Susa, leaving Nearchus with the fleet to follow, as soon as the Etesian winds‡ should cease. He had been more than nine months in sailing down the Hydaspes, and Indus. He crossed the Hydaspes about the summer solstice in the preceding year, and of course had been in the field, or in some kind of warfare, during two rainy seasons; we are told, however, by the author of the Ayin Acbaree, that but little rain falls in the lower parts of Moultan: that is, the part bordering on the Indus. Nearchus sailed about the middle of October § with the N.E monsoon; conducting, according to Dr. Gillies, in his elegant History of Greece, "the first European fleet" which navigated the Indian seas." By the journal of this voyage, preserved by Arrian, it appears that the fleet sailed out of the western branch, by the distance between the mouth of the Indus and the river Arabius, which was only 1000 stadia; for Arrian gives the breadth of the delta at 1800 stadia, along the sea coast.|| Arrian

* See the Introduction.

† Ibid.

: The Etesian winds blew from the N.E in the Mediterranean, in the months of July and August; and the ancients thought proper to apply the same term to the periodical winds of the same season in the Indian seas, although they blew from the opposite quarter.

§ The first of October, O.S. according to Usher.

|| Pliny gives it 220 miles, so that he reckoned about eight stades to one of his milas.

takes notice, that when Nearchus *stood* out to sea, on the coast of India, he found either no shadow at noon; or else the shadow, if any, was projected southward. This however, could not possibly happen, because Alexander did not arrive till after the summer solstice, nor till August. And yet Arrian took this from Nearchus's journal: but whosoever examines the geography of it, will find that he could never be within a degree of the tropic, allowing him to have sailed at any reasonable distance from the shore.

It may appear extraordinary that Alexander should, in the course of a few months, prepare so vast a fleet for his voyage down the Indus; especially as it is said to be the work of his army. But the truth is, that the Panjab country, like that of Bengal, is full of navigable rivers; which communicating with the Indus, form an uninterrupted navigation from Cashmere to Tatta: and, no doubt, abounded with boats and vessels ready constructed to the conqueror's hands. That he built some vessels of war, and others of certain descriptions that might be wanted, is very probable; but transport and provision vessels, I doubt not, were to be collected to any number. There were about 80 triremes; and the whole number of embarkations was near 2000. I think it probable, too, that the vessels in which Nearchus performed his coasting voyage to the gulf of Persia, were found in the Indus. Vessels of 180 tons burthen are sometimes used in the Ganges; and those of 100, not unfrequently.

CASHMERE is the only subject that remains to be discussed on the east of the Indus; which it owes to its particular situation in respect of the Panjab; being detached from it in point of geographical construction, as well as actually separated from it by strong natural barriers. The communications of Capt. Kirkpatrick, how full soever of information, on the subjects that have

been already discussed, are even abundantly more so in the present instance; for he has furnished me with translations of the most approved itineraries between Lahore and Cashmere, kept either by the Mogul emperors themselves, or by their order, and under their immediate inspection; and having the road distances contained in them actually measured; and the most remarkable objects that occurred on the way, noted with a great degree of precision. To account for this attention on the part of the emperors, it must be observed, that a journey to Cashmere in the spring season, was regarded by them as the highest gratification that luxury could afford: every circumstance, therefore, which related to the communications with such a scene of pleasure, became interesting: for a perfect knowledge of the detail of each, would, of course, enable the royal visitors to determine the most eligible route, suited to seasons and circumstances. The reader may collect from Bernier (the most instructive of all Indian travellers), in what mode the emperors travelled to Cashmere; as he has written a full account of his journey, when he travelled thither in the suite of Aurungzebe, in the year 1664. And when we reflect on the burning climate he left behind him, to breathe the pure and temperate air of Cashmere, and to contemplate the beauty of its scenery, we must not fail to applaud the taste of the emperors, who indulged themselves in so elegant, and no less rational, a luxury.

Nor did Capt. Kirkpatrick content himself with bare translations of the itineraries; but, in the true spirit of science, added comments and explanations, when the nature of the subject appeared to require it: *without* which aids I might frequently have fallen into error; and *with* which, little remained for me to do, but to effect the geometrical construction. I shall have great occasion to rejoice, if the histories from whence he has extracted these, and other geographical materials, should hereafter appear in an European language, through his means: and yet

more, if they may be in the smallest degree illustrated, by my labours.

His inquiries have produced three measured routes leading into Cashmere, from Lahore; and Mr. Forster's Travels, a fourth, in which the distances are estimated only. The first route to be considered, in the construction, is the shortest of the measured ones, in order to obtain the most direct line of distance between Lahore and Cashmere: and this is the Bember route, of which that portion between Lahore and Bember itself has been already considered, both as to bearing and distance, in page 85: and may be corroborated by a reference to the position of Jummoo, in page 106; since Rotas, Gujerat, and Sealkote, are regulated by the points of Jummoo and Lahore. Accordingly, Bember is taken at 33 Acbaree coses from Lahore, on a bearing of N $\frac{1}{4}$ W. And it may be concluded, as the road to Cashmere by Bember is very straight, that the whole lies nearly in the same line of direction as that portion of it between Lahore and Bember; or rather, of the ascent named the *height of Bember*, which appears to be a very few miles to the eastward of the fortress, and may bear from Lahore, about N $\frac{1}{4}$ W: Sirinagur, the capital of Cashmere, therefore, may be supposed to lie in the same direction. The distance on this line, according to the measured route of the Emperor Acbar, was 79,9 Aebaree coses, which, at the rate of 31,16 to a degree (see page 85, and note), produce 153,6 G. miles of direct distance. But as the road lies over three mountainous ridges, named *Ruttun-Puncbal*, *Perr-Puncbal*, and *Nari-Birari*, which take up more than 26 miles; perhaps $\frac{1}{2}$ may be allowed for windings, in this part. And for the Bember, and other heights, some farther deduction should be made; and then the whole distance may be taken at 150 G. miles, instead of the original 153,6. However, as I suspect that Acbar's measurement did not commence from the centre of Lahore, but from the suburbs, I shall take 151 for the distance of Sirinagur, which in the direction of N $\frac{1}{4}$ W, places that city in

latitude $34^{\circ} 20' 30''$; and in longitude $73^{\circ} 44'$; or 6 minutes only west of Lahore. And Bember, by the same adjustment of distance, will be $64\frac{1}{2}$ G. miles from Lahore; the 33 Acbaree cosses giving about $63\frac{1}{2}$ G. miles (from the suburbs).

The Oriental tables give for the latitude of Cashmere, or Sirinagar (for the capital is known by either of those names), $35^{\circ} 15'$; meant perhaps for $34^{\circ} 15'$. Its longitude, in the same tables, is quite out: being more than a degree to the west of Lahore. It is certain, that according to the authorities on which we have determined the positions of Lahore, Attock, and Cabul, that of Cashmere must come no farther to the west, than the construction allows: and one very strong circumstance in favour of this argument is, that the space between Cashmere and Cabul, in the map, is no more than is required for the dimensions of the several provinces that lie between them; according to their description in the Ayin Acbaree, and in Capt. Kirkpatrick's MSS. This matter will be fully discussed, when we speak of the countries west of the Indus. Nor does Cashmere seem to be misplaced in respect of the surrounding countries, as far as our knowledge goes; for in the Ayin Acbaree, Puckholi is said to lie on the west, and the territory of the Ghickers to the SW; which agrees also with the map. It also accords with the measured routes between Cashmere and Attock; and with Mr. Forster's idea of the bearing from Jummoo, which was N by W.

A second measured route was that from Lahore to Cashmere, by way of Hufsan-Abdal and Puckholi; a remarkably circuitous one, but used for the purpose of entering Cashmere during the height of the spring, in order to enjoy its beauties in that delightful valley; which, although in a metaphorical sense, the region of perpetual spring, was of course, the most attractive during the actual spring, the blooming season. And this could not be effected by the more direct road of Bember; because that leads over vast mountains, which the snow renders impassable during not only the spring, but also part of the summer. But the Puckholi, or Hufsan-Abdal

road, leads into Cashmere through the valley, or pafs, by which the Behut issues; which being much lower, is, of course, exempted from snow. (See p. 99.)

Hussan-Abdal lies in the direct road from Rotas to Attock, 12 royal cosses, or about $24\frac{1}{4}$ G. miles, to the eastward of the latter: and this point of Hussan-Abdal being thus fixed, it becomes unnecessary to take notice of any other part of the route, save that between it and Sirinagur. The distance between these places was $75\frac{1}{4}$ Achbaree cosses, by a measured route of Jehanguire,* but it being very circuitous, the different portions of it require a separate discussion; and cannot, after all, be applied with success, without a reference to Mr. Forster's idea of the bearings between Sirinagur, and Bazaar, his station on the Indus: and as the outlet of the Behut river regulates the direction of the *first part of this line*, which makes a considerable angle with the rest, it becomes necessary, in the first instance, to examine and fix the position of the valley of Cashmere itself; with a view to ascertain the place of this outlet, rendered famous under the name of the Pafs of Barehmoolah.

1st. Mr. Forster says (Vol. I. p. 225), that the valley extends from SE to NW (perhaps, more correctly, SE by E, and NW by W): he entered it by the SE, and traced the general course of the river Behut, north-westward, to Sirinagur; which is situated towards the middle of the valley of Cashmere.

2d. The Ayin Acbaree describes the general situation of several of the districts of Cashmere, all which prove that the course of the Behut is from SE to NW: for its source is said to be in Wair or Weer Purgunnah, situated in the SE quarter from Sirinagur.† Eencha, or Uneej, Purgunnah, called also Islamabad,‡ lies on the SE; and the town of Islamabad itself, to which Forster came, is

* The cosse of Acbar was used also by his son Jehanguire; and that of Shah Jehan succeeded it.

† Ayin Acbaree, Vol. II. article Cashmere.

‡ Kirkp. MSS.

5 or 6 miles below the spring of Wair. Punjberary, and Pampour, two towns between Islamabad and Sirinagur, are in Uneej and Veh Purgunnahs; both of which lie on the east of Sirinagur. Soliman's Mount, near the river, is also in the same quarter.* So that the general course of the Behut *above* Sirinagur, is clearly from the south-eastward; and it makes a deep bend to the north, by Punjberary and Pampour. The distance by water from Sirinagur to the head of the Behut, is 22 measured royal coses; by land 14; or about $28\frac{1}{2}$ G. miles.†

3d. Capt. Kirkpatrick quotes Abdul Humeed, to prove that the Behut proceeds from the *south* to Sirinagur, and pursues a N course from that city. It should rather be N W; because the Ayin Acbaree, Vol. II. p. 109, of the *Tukseem Jumma*, states that Geyehamoon‡ Purgunnah lies to the N W of Sirinagur (and it appears from other circumstances, at the extremity of the valley); and in page 166, that Oller (or Tal) lake, lies near it, and receives the river Behut (Abdul Humeed and Bernier, both relate the same, concerning the river and lake); and also that this lake is near Little Thibet, which in the account of the boundaries, in page 152, is said to lie on the N W of Cashmere; as Great Thibet does on the N E. The lake is said to be of great extent; no less than 53 B. miles in circuit; or perhaps 16 or 17 acres; which account allows it to reach to the frontiers of Little Thibet, without violence to the statement of the distance between Sirinagur and Barehmooleh (the outlet of the Behut) which is no more than $12\frac{1}{2}$ royal coses by land; 14 by water. These circumstances considered, we can have no doubt that the course of the Behut is to the N W, from Sirinagur to the lake: but the length of its course, in this direction, we are not told; any more than the length and direction of its course, from the lake, to its entry between the mountains at

* Ayin Acbaree, Vol. II. article Cashmere.

† Kirkp. MSS.

‡ Supposed by Capt. Kirkpatrick to be the same with the district of the RAJAH GAMON, mentioned by Bernier.

Barehmooleh. It may, however, be inferred, that the greatest part of the 14 cofses by water, is *to the lake* (considering that the valley of Cashmire extends 40 B. miles to the N W from Sirinagur); and that the course of the Behut, after its efflux from the lake, is short, and towards the S W quarter: by which, Barehmooleh, will take a W by N, or W N W position, in respect of Sirinagur.

The route to Cashmere by Punoach (the 3d of the measured routes), throws some light on the position of Barehmooleh, in respect of Sirinagur. The Punoach road branches from that of Bember, at Thunah, 23 $\frac{3}{4}$ Acbaree cofses short of Sirinagur; and crosses the mountains far to the west of Peer-Punchal.* The distance from Thunah to Barehmooleh, is 28 royal cofses, or 56 $\frac{1}{2}$ G. miles, by the ordinary calculation: but as an allowance must be made for the ground lost by the steepness of the mountains, as in the Bember road (page 134), 53 G. miles may be taken for the direct distance; and Barehmooleh will bear W by N $\frac{1}{2}$ N from Sirinagur. The distance may be taken at 29 $\frac{1}{2}$ G. miles.

Having placed Barehmooleh, the nearest point in Jehanguire's route from Sirinagur to Husan Abdal, I proceed to examine the remainder of that route; the bearing of which will best be understood by a reference to Mr. Forster's remarks. He supposed Muziffer to bear W by S, 71 cofses from Sirinagur; and his station on the Indus 64 cofses from Muziffer, S W, and S by W. These, compounded, give a course of W 35° S, 130 cofses: and according to my construction, it is W 28° S, 136 G. miles. The bearings do not materially differ, the nature of the materials being considered: the distances certainly appear very different; for if Mr. Forster's was taken absolutely, it would place Sirinagur more to the east than even my construction warrants, by go or 40 miles; which is more improbable, than that he should either have estimated his cofs too low, or have taken so circuitous a route, as

* The distance from Lahore to Cashmere, by the road of Punoach, is 93 royal cofses.—Kirby. MSS.

to sink the quantity of his horizontal distance very considerably. The fact is, that the standard of his coses is very short all the way from Oude: and moreover, he remarks that his party avoided Puckholi, and other places that are implied to lie in the direct road, through motives of prudence. I shall therefore content myself with reflecting, that his line of bearing differs only 7 degrees from my supposition; and regard the position of Sirinagur, as generally true in respect of Attock and Hufsan-Abdal.

Jehanguire's measured distance between Barehmooleh and Hufsan-Abdal, is $63\frac{1}{2}$ Acbaree cosses, which on ordinary roads might produce $129\frac{1}{2}$ G. miles: but as 25 cosses of the road between Barehmooleh and Mooker, is along the rugged and winding paths, through which the Behut forces itself, in its escape from the valley of Cashmere, a considerable reduction must take place. There are also some high ridges to be crossed between the Kishengonga and Puckholi: and all these together may reduce the $129\frac{1}{2}$ on ordinary ground, to 116 in this place: for this is the space that the construction leaves, between Barehmooleh and Hufsan-Abdal. And this being allowed, Sirinagur, or Cashmere, ought to take the position assigned it, at 6 minutes of longitude west of Lahore.

A fourth road to Cashmere (but not measured) is that of Mr. Forster from Jummoo, through Kishtewar. I am inclined, from the similarity of names, to suppose this to be the road mentioned in Capt. Kirkpatrick's MSS. under the name of Jowmuk, or Chowmuck: and which Abdul Humeed states in the gros (for no particulars are given) at 109 cosses (I conclude, of the royal * standard) from Lahore.

I do not mean to rest any part of my argument, for the position of Cashmere, on the result of this route; on the contrary, I have formed the line of Mr. Forster's route from Jummoo, with a reference to the position of Cashmere, inferred from the former *data*.

* This was the standard, uniformly made use of by Abdul Humeed.

Mr. Forster estimated the general bearing from Jummoo to Cashmere, at N by W; which agrees with the former *data*; but the detail of the route leads first N E by E, or more eastwardly, to the crossing-place of the Chunaub river; and thence north, and N W. The occasion of this great bend in the road, is to gain a convenient crossing-place over the rapid Chunaub; and the transit is effected by means of a large basket, drawn along a tight rope, extended from one high rocky bank to the other. The breadth is 70 or 80 yards.

In Capt. Kirkpatrick's MSS. we find the detail of an expedition from Cashmere into Kishtewar, during the reign of the Emperor Jehanguire (A. D. 1619). The capital of Kishtewar is described to lie near the east bank of the Chunaub river, at 60 cosses from Sirinagur.* These cosses were of the common standard, I apprehend; and the route of the army was over Peer-Punchal: therefore very circuitous. The length of this march, however, confirms Mr. Forster's statement of the bearing of the road, to the crossing-place of the Chunaub; and shews that the general course of that river, is pretty uniform throughout.

Mr. Forster reckoned 96 cosses between Jummoo and Sirinagur; of which, 45 were between Jummoo and the passage of the Chunaub; and the remaining 50 between the Chunaub and Sirinagur; and of this number, 18 were by water, down the stream of the Behut, from Islamabad, or Eencha (see page 136).

The valley of Cashmere appears to be of an oval form, and to have its largest extent from S E to N W; or perhaps more strictly from S E by E and N W by W. Mr. Forster reckons its dimensions 80 British miles, by 40. From the measured distances already exhibited, between *Wair*, the head of the Behut, and Barlemooleh, where the Behut leaves the valley; we collect that the distance between those places, through Sirinagur, is $25\frac{1}{2}$ royal

* The name of this capital appears to have been Mundol, or Mundol-Muder; and its situation 3 cosies east of the river Chunaub (Kirkp. MSS.). By circumstances, it ought to be near the place where Mr. Forster's route crosses it.

cosses; answering to about $5\frac{1}{2}$ G. miles; but as Sirinagur lies out of the direct line between the two (as is proved by the construction), perhaps 50 G. miles, or 58 British, may be the true distance. But this is not the greatest extent of the valley; since it has been shewn that the Oller lake, by its position and dimensions must necessarily extend to a point much more distant from Sirinagur, than Barehmooleh does; although the exact quantity of the distance cannot be ascertained. And on the other hand, Mr. Forster entered the S E end of the valley at Durroo, or Surroo, 5 cosses before he came to Islamabad: of course, Durroo must lie beyond the head of the Behut. These circumstances considered, Mr. Forster's estimate of 80 British miles for the length of the valley, supposing it to be meant for the flat part of it, appears to exceed the truth by a very few miles only; for 74 or 75 can very clearly be made out. But he reckoned it only 40 in breadth, which appears much too little; and I suppose it to be 50, or more: for Heerapour, at the entrance of the valley from the side of Bember (the south side), is 11 Acbaree cosses, or nearly 25 British miles, across from Sirinagur; and Lar, according to Bernier, is about as far from Sirinagur, as Barehmooleh is; 27 B. miles: but as Sirinagur does not lie directly between Heerapour and Lar (for the former bears about S from Sirinagur; and Lar, by the Ayin Acbaree, is in the N.E quarter from Sirinagur), a considerable angle takes place, and may probably reduce the 52 miles, to 50 in direct distance.

By order of Jehanguire, the length and breadth of the province of Cashmere, or rather, probably, the roads through and across it, were measured; and the dimensions, 56 Acbaree cosses, by 27, were registered accordingly (Kirkp. MSS). But these dimensions regard the *political boundaries* only; because Bholbas, the western frontier, is said to be $18\frac{1}{2}$ of these cosses within the mountains below Barehmooleh. And in the opposite, or south-east quarter, the valley of Banhal, a dependency of Cashmere, lies at

the distance of several coses beyond the great circle of mountains that surrounds the valley of Cashmere (Forster, Vol. I. p. 224). This district of Banhal is placed in the Ayin Acbaree on the south-east of Sirinagur (Vol. II. p. 108. of the *Tukseem Jumma*), and this may be adduced as a proof that Mr. Forster entered Cashmere by the south-east; and also that the valley of Cashmere has a S E. and N W. position.

As Jehanguire's measurement leaves at least 8 $\frac{1}{4}$ B. miles for the length of the valley above Barehmooleh, and 60 for the greatest breadth, it may be supposed that it included the slope of the mountains, as well as the level or hollow part of the valley; and that the term of the distance eastward, was the summit of mount *Kantel*, described by Desideri, as the common boundary of Cashmere and Great Thibet (*Lett. Edif.* Vol. XV. p. 190). The dimensions given in the Ayin Acbaree are not to be regarded, being estimated only; for Jehanguire's measurement took place long after that book was compiled. In the same book, we find Cashmere divided into two parts, namely, MERAJE, and KAMRAJE; the former being (as is expressed in Vol. II. p. 170.) the eastern part, and containing the districts situated to the east, the S E., and the N E., of Sirinagur: and the latter, the western part, containing the N W. and S W. districts.

With respect to general position, Cashmere is bounded on the west, by the district of Puckholi; on the S W. by the territory of the Ghickers; on the S E. by that of Jummoo; and on the east, by the river Chunaub: Great Thibet lies on the north-east; and Little Thibet on the north-west. In the Ayin Acbaree, from whence this account is transcribed, there is often a great want of accuracy in the article of bearings; and the intermediate points are often meant for the cardinal ones; and *vice versa*. But in the description of the boundaries of Cashmere, there appears to be more consistency than usual.

The capital of Cashmere has the same name as the province,

according to Mr. Forster, and M. Bernier: but the Ayin Acbaree, at an earlier period, names it Sirinagur.* It is a large city, and built on both sides of the river Behut, which has a remarkable smooth current throughout the whole valley (according to Mr. Forster); and this proves the remarkable flatness of the country, as the body of water is very large.

The valley or country of Cashmere, is celebrated throughout upper Asia for its romantic beauties, for the fertility of its soil, and for the temperature of its atmosphere. All these particulars may be accounted for, when it is considered, that it is an elevated and extensive valley, surrounded by steep mountains, that tower above the regions of snow; and that its soil is composed of the mud deposited by a capital river, which originally formed its waters into a lake, that covered the whole valley; until it opened itself a passage through the mountains, and left this fertilized valley, an ample field to human industry, and to the accommodation of a happy race: for such the ancient inhabitants of Cashmere undoubtedly were.

Although this account has no living testimony to support it, yet history and tradition, and what is yet stronger, appearances, have impressed a conviction of its truth, on the minds of all those who have visited the scene, and contemplated the different parts of it.

The author of the Ayin Acbaree dwells with rapture on the beauties of Cashmere: whence we may conclude that it was a favourite subject with his master Acbar, who had visited it three times before Abul Fazil wrote. Other emperors of Hindoostan visited it also, and seemed to forget the cares of government, during their residence in *the happy valley*. It appears that the periodical rains, which almost deluge the rest of India, are shut out of Cashmere by the height of the mountains; so that only light showers

* In the revenue books, the province of Cashmere is written JENNAT-NUZER, or the PARADISE-RESEMBLYNG Sonbah. (Kirkp. MSS.)

fall there: these, however, are in abundance enough to feed some thousands of cascades, which are precipitated into the valley, from every part of the stupendous and romantic bulwark that encircles it. The soil is the richest that can be conceived; and its productions those of the temperate zone. A vast number of streams and rivers from all quarters of the valley, bring their tribute to the Behut or Jhyhum, the parent of the soil; a large navigable river, in which we recognize the famous Hydaspes of Alexander, who crossed it about 100 miles below its outlet from the valley. Many lakes are spread over the surface, and some of them contain floating islands. In a word, the whole scenery is beautifully picturesque; and a part of the romantic circle of mountains, makes up a portion of every landscape. The pardonable superstition of the sequestered inhabitants, has multiplied the places of worship of Mahadeo, of Bishen, and of Brama. All Cashmere is holy land; and miraculous fountains abound. One dreadful evil they are constantly subject to, namely, earthquakes; and to guard against their most terrible effects, all the houses are built of wood; of which there is no want.

Among other curious manufactures, with which Cashmere abounds, is that of the shawls; which are distributed over all the western and southern Asia. We learn from M. Volney, that they even make a part of the dress of the Egyptian Mamlouks: and at present (as if to exhibit the most striking contrast in the classes of wearers) they are worn by the English ladies. There remains no doubt, but that the delicate wool of which they are made, is the produce of a species of goat, either of that country, or of the adjoining one of Thibet. Notwithstanding the present extensive demand for shawls, the manufacture is declined to one-fourth of the former quantity; which may be easily referred to the decline of the Persian and Hindooostanic empires. Here are sheep called *Hundoo*, which, like those of Peru, are employed in carrying burthens. The annual public revenue of Cashmere, in

the time of Aurungzebe, appears to have been only about 55,000l.* From what has been said above, it was, no doubt, a favoured province.

The Cashmerians have a language of their own, said to be anterior to the Sanscrit. And it would appear that they had also a religion of their own, different from that of the Hindoos. Abul Fazil says, "the most respectable people of this country are the "Reyshees, who, although they do not suffer themselves to be "fettered by traditions, are doubtless true worshippers of God." Nothing can exceed the liberality of mind both of Abul Fazil and of his master, the great Acbar: but the former appears to have caught some of the enthusiasm of *the valley*, by his descriptions of some of the holy places in it. To sum up the account of Cashmere, in the words of the same author, "It is a garden in perpetual "spring."

So far am I from doubting the tradition, respecting the existence of the lake that covered Cashmere, that appearances alone would serve to convince me, without either the tradition, or the history. It is a mere natural effect; and such, I apprehend, must be the economy of nature, in every case where the waters of a river, are inclosed in any part of their course, by elevated lands. The first consequence of this stoppage is, of course, the conversion of the inclosed lands into a lake: and if this happens near the fountains of the river, and the ground is solid, it is likely to remain a lake for ever: the river not having force enough in its infant state, to work itself a passage through the mountains. Hence it is that more lakes are found near the sources of rivers, than in the lower parts of their course. If the river be inclosed after it has gained a great accession of water, and of course, strength; it will indeed at first, form a lake, as before; but in time, the place at which it runs

* Capt. Kirkpatrick's MSS. state the actual and realized revenues to have been about 25,000l. in the time of Shah Jehan; and only 20,000l. in that of Mahomed Shah.

over, will be gradually fretted away, as in the case of the Behut abovementioned. The Euphrates, in like manner, opens itself a passage through mount *Taurus*; and the Ganges through mount *Imaus*: and even though the base of the mountain be of the firmest texture, it will give way to the incessant friction, through a course of ages: for either of these passages may have been an operation of many thousand years. In the case of the Ganges, which passes through mount *Imaus*, it may be supposed that the lower *strata* were softer than the upper; for the upper still remain, to a great height. In that of the Behut, the lake appears to have existed long enough to deposit a vast depth of soil, before it dispersed. The Cashmerian history names the lake *SUTTY-SIRR*: and adds, that Kushup led a colony of Bramins to inhabit the valley, after the waters had subsided.

From Cashmere, Mr. Forster went by a very circuitous route, to Cabul; the barbarous state of the people who inhabit the shores of the Indus, above Attock, making this precaution necessary. The countries in question are those of Puckholi, Sewad (or Sowhad), and Bijore; the scene of Alexander's warfare on the west of the Indus: all of which were subjected to regular authority, during the long and vigorous reign of Acbar. We are told by the Ayin Acbaree, that several of the streams that form the head of the Indus, yield gold dust: and this accounts for the circumstance of the Indian tribute being paid in gold to Darius Hystaspes; according to Herodotus (Book III.). The sum indeed seems too great, in proportion to what other provinces paid: but as the gold of the river *Pactolus* has been exhausted; so may that of the Kishengonga, in Puckholi, be diminished. Puckholi, I take to be the *Pactya* of Herodotus, Book IV. (as well as the *Peucelaotis* of Arrian), from whence Scylax set out to explore the course of the Indus, under the orders of the same Darius: for it lies towards the upper part of the navigable course of that river; being the frontier province of Hindooostan, east of the Indus. The Ayin Acbaree gives its

dimensions at 35 coses, by 25; and says that it is bounded on the south by the districts of Attock. We know few particulars concerning it; except that the northern, and by far the greatest part of it, is mountainous. Its present capital of the same name, is at a considerable distance on the east of the Indus, and therefore cannot occupy the site of the *Peucelaotis* of Alexander; since that lay on the west bank of the Indus: but as Alexander advanced to this place, from the neighbouring district of *Bazira*, and the country of the *Affasani* (*i. e.* Bijore, and Ashenagur, which was the name of Sewad, only a few centuries ago), I very much suspect that *Peucelaotis* was the ancient name of *Puckholi*; and that an alteration of boundary, which has frequently taken place in other provinces, may have confined its limits to the east side of the Indus, in the present times; although it might anciently have extended farther to the west.

The first part of Mr. Forster's route from Cashmere, was down the course of the Behut, 14 coses; at which point he disembarked, and struck to the westward, towards Muzifferabad; the capital town of a chief, who styles himself Sultan of a district of the same name, bordering on the south-west of Cashmere; the frontier of which was passed at $15\frac{1}{2}$ coses from the landing-place, on the bank of the Behut.

We have before taken notice that Mr. Forster crossed the Indus at Bazaar, 20 miles above, or to the north-eastward of Attock. The greatest part of the way from Muzifferabad to Bazaar, was mountainous, and the country subject to petty princes of the Pathan race. Mr. Forster entered the country of Timur Shah Abdalla, at Hyderbungee, a town about eight miles to the east of the Indus.

This route of Mr. Forster differed very considerably from the one of Jehanguire, above recorded: for the former left Puckholi, through which Jehanguire passed, to the south: but a place named Mangullee, occurs in both routes, between Puckholi and the

Indus; and might be the point of separation of the Hufsan-Abdal, and the Bazaar routes. The river of Muzifferabad, mentioned by Forster, must have been the Kishengonga; and the Nhah, the Nainsook; both of which join the Behut.

From Bazaar, Mr. Forster proceeded by the road of Paishawur and Cabul, to Candahar, in his way to Korasan, and the Caspian. His remarks were of singular use in the construction of the map of the heads of the Indus, &c. in my first edition; but the communications of Capt. Kirkpatrick, have furnished matter so abundantly superior to any that could be collected by a casual passenger, that all Mr. Forster's observations between Cashmere and Cabul, are necessarily superseded: but beyond this point they preserve all their former value.*

*Of the Countries belonging to HINDOOSTAN; situated on the West
of the INDUS.*

The materials for describing the geography of the countries, on the west of the Indus, though but scanty, compared with those on the east; yet afford positions enough, to enable us to comprehend the form and extent of the tract, situated on the north of

* The history of this gentleman's travels is very curious. He proceeded by land from Bengal to the Caspian sea, and from thence by the ordinary route on the river Wolga, &c. to Petersburgh, in the years 1783 and 1784. It was necessary, from a regard to safety, to avoid the country of the Seiks; that is, Lahore: he accordingly crossed the Ganges and Jumna within the mountains, and proceeded to Cashmere by the road of Jumnaoo. He visited this celebrated country, I presume, through motives of curiosity, as it lay so far out of his way. From thence, crossing the Indus about 20 miles above Atrock, he proceeded to Cabul, the capital city of Timur Shah, King of Candahar; or more commonly known by the name of *Ahdaf*. He meant to have proceeded from thence, through the country of Bucharia, or Transoxiana; but finding it too hazardous, he pursued the accustomed route of the caravans by Candahar. From this place, which some have supposed to be the *Paropamisus* Alexandria, his route was nearly in a straight line through Herat, to the south extremity of the Caspian; across the modern provinces of Seistan, Korasan, and Mazanderan; which were known to the ancients, under the names *Paropamisus*, *Aria*, *Parthia*, and *Tapuria*. It will be perceived that (as far as a comparison can be made) Mr. Forster traced back a considerable part of the route of Alexander, when in pursuit of Bucephalus. As his tra-

Candahar; as well as a general idea of the courses of its principal rivers, and of certain ranges of mountains.

The principal points on which the geography of the above tract chiefly depends, have been already discussed (in page 87, *et seq.*): namely, those of Paishawur, Cabul, Ghizni, and Candahar. But those points on which the position and direction of the great ridge of Hindoo-Kho, the boundary of the province of Cabul, on the N.W., depend; belong rather to the Persian, than to the Indian geography: therefore I shall reserve the discussion of them, for their proper place; hoping, in due time, to submit to the judgment of the public, the result of my labours, in the attempt to improve the geography of Persia. I shall only mention, in this place, that the principal points of Bamian, Anderab, Ghourbund, and Badakshan; as well as many subordinate ones; are fixed, very satisfactorily to my mind, by means of materials in my possession; and from which the additional map, on a smaller scale is drawn. And by these it appears, that the part of Hindoo-

velled in the disguise of an Asiatic, and in the company of Asiatics, through a vast extent of Mohammedan country, where the religious prejudices of the natives, are nearly equalled by their political jealousy of all sorts of foreigners; we may pronounce the man who could perform such a task without suspicion, to possess great presence of mind, and no less discretion; added to an uncommon share of observation of manners, and facility of attaining languages. Detection had been worse than death: and he was subject to continual suspicion from his fellow travellers, who were not in the secret. I hope he means to publish his observations on the manners, government, and present state of that part of Persia, of which we know the least; as well as of Cashmere, a subject yet more interesting to the philosopher and naturalist. It may serve to shew the extensive commercial intercourse, and credit in Hindooostan, and the adjoining country (once dependent on it), notwithstanding the variety of governments it contains, and the unsettled state of the greatest part of them; that the bills of exchange which Mr. Forster obtained at Calcutta, were negotiable at Cabul, 17 or 18 hundred miles distant; and the capital of a kingdom totally unconnected with, and possibly hostile in political sentiments, to that in which the bills originated. From the time he left the last British station in Qude, to the Caspian, in which he employed near a twelvemonth, and travelled 4700 English miles; he was compelled to forego most of the ordinary comforts, and accommodations, which are enjoyed by the lowest class of people, in European countries; sleeping in the open air, even in rainy and snowy weather; and contenting himself with the ordinary food and cookery of the country he passed through. Indeed it was barely possible to carry with him the means of procuring comfort, without hazarding his safety, as he was so long on the road.

* * * The above note was written in 1788: and in 1790, the first volume of Mr. Forster's travels, including his journey from Bengal, to the borders of Cashmere, was published in Bengal; and the second was expected soon to follow. But I am sorry to add, that very late accounts from India, announce the death of this enterprizing traveller; which happened at the court of the Nizam, where he resided in a public capacity.

Kho,* which separates Cabul from Balk, and Badakshan, takes a N E direction, between Bainian and Anderab: after which, its *particular* direction is unknown to us (although its *general* direction, is unquestionably between the east, and north-east), until it appears again at the sources of the Jihon (or *Oxus*), at about 200 miles to the E of the city of Badakshan: and from thence, passing on to the north, it gives rise also to the Sihon (or *Jaxartes*). On the other hand, the ridge which separates Cashmere from Great Thibet; and Cashgar from Little Thibet (the true *IMAUS*, or *HIMMALEH*); appears to incline, in its northern course, towards the continuation of HINDOO-KHO, just described; and even to join it. Here then, we are to imagine an extensive tract, of a triangular form, whose base, of 200 miles, or more, is a line drawn from Cashmere, to the eastern confines of Anderab; and whose sides are the continuation of Himmaleh on the east, and that of Hindoo-Kho on the west. This space contains, amongst other countries, those of Little Thibet (or *Balti-stan*), and *Sakita*; the *Byltæ*, and *Sacæ*, of Ptolemy; as also Kuttore, which answers to the *Comedi* of the same geographer: it also contains, as we have said in page 97, the sources of the Indus. From the descriptions of Little Thibet and Kuttore,† we may conclude that this whole space is mountainous; and that its general level is far elevated above the countries on either side of it. We have no particular information respecting the position of the range of mountains, which forms the base, or southern side of the triangle: but circumstances leads us to conclude, that the highest of these mountains, are far removed from the northern frontier of the provinces, subject to, or commonly regarded as a part of, Hindooostan: and that the mountains which properly constitute the boundary of Hindooostan, towards Kuttore (or Caferistan), commence in the

* The term HINDOO-KHO, or HINDOO-KUSA, is not applied to this ridge, throughout its whole extent; but seems confined to that part of it, which forms the N W boundary of Cabul: and this is the INDIAN CAUCASUS of Alexander.

† Kirkpatrick's MSS. and Lett. Edif. Vol. XV.

parallel of Cashmere, or about $34\frac{1}{2}$ degrees; and extending westward from that celebrated country, separate Puckholi, Sewad, and Bijore, on the south, from Caferistan on the north: and advancing from thence, to a junction with mount Hindoo-Kho, in the line between Cabul and Anderab, separate Lumghan (see page 113), which appears to have been the ancient frontier of Cabul, from those districts, which, after the time of Baber,* were added to, and have since become a part of, the province of Cabul; according to its defined limits in the Ayin Achbaree. On the north of this range, the whole country may be regarded as mountainous: on the south, the mountainous tract is confined chiefly to Sewad, Bijore, Teerah,† and a part of Puckholi.

The soubah of Cabul, under the Mogul emperors, comprehended the whole space between the Indus, and the mountains of Hindoo-Kho, in dimensions 150 cosses, according to the Ayin Achbaree:‡ and this is its greatest extent; for 100 cosses are given for its breadth, between Kurrabagh and Chuganserai (in a north-easterly direction; its length being from S E to N W). Kurrabagh is known to be 11 royal cosses to the westward, or S W of Ghizni: and Chuganserai, according to the Emperor Baber, is a town, situated at the western extremity of Caferistan; and on a river of the same name, which comes from the N E quarter (in respect of the town), and from behind, that is, from the north of, Bijore: || and flows from thence to the S W, or S SW, to join the waters of Penjesehr, &c. from the north-west. Cabul is confined on the north, by the continuation of Hindoo-Kho; and on

* Kirkpatrick's MSS.

† Teerah is a small province, or district, lying between Paishawur and Cabul; and confined on the N and S by the river of Cabul, and by the southern ridge of snowy mountains. (Kirkp. MSS.)

‡ Vol. II. p. 199. The distance from Attock to the foot of Hindoo-Kho, by my construction, is 210 G. miles; equal to 147 Hindoostany cosses, reduced to horizontal distance. Here we have a clear proof that the coss, used by Abul Fazil, was of the common, or Hindoostany kind, of $42\frac{1}{2}$ to a degree. It furnishes also a satisfactory proof of the accordance of Abul Fazil's distances, with those communicated by Capt. Kirkpatrick.

|| Kirkpatrick's MSS.

the N E (as we have seen) by Caferistan, or Kuttore. Towards the south, or the quarter of Bungush, we are ignorant of its extent: but as its *greatest breadth* is implied, in the space between Kurrabagh and Chuganserai, it may be concluded that it cannot extend far beyond the river of Nughz.

The Ayin Achbaree is very full, in its description of the province of Cabul; and it appears by this, and every other account, to be a country highly diversified: being made up of mountains, covered with eternal snows; hills of moderate height, and easy ascent; rich plains, and stately forests; and these enlivened by innumerable streams of water. It produces every article necessary to human life, together with the most delicate fruits and flowers. It is sometimes named Zabulistan, from Zabul, one of the names of Ghizni; which was the ancient capital of this country, and of which Candahar was then reckoned a part: although by the arrangement in the Ayin Achbaree, Cabul itself is reckoned a part of the soubah of Cashmere. Cabul, however, has since been regarded as a soubah of itself; and with evident propriety.

Cabul, as well as Candahar, together with some districts on the east of the Indus, are comprised within the extensive dominions of Timur Shah Abdalla (usually styled King of Candahar), which extend westward to the neighbourhood of the city of Tershish; including generally Cabul, Candahar, Paishawur, Ghizni, Gaur, Seistan (or Sigistan), and Korasan. This tract is not less than 500 B. miles in length, from east to west: but although we know not what the extent may be, breadthwise; yet there is little reason to suppose that it bears any proportion to the length. It does not differ much from the tract comprised within the ancient kingdom of Ghizni. Timur Shah's Indian subjects are chiefly Afghans; the rest, Persians and Tartars of almost every denomination. His government is said to be mild and equitable; with some degree of relaxation as to military discipline: which in a government purely military, forbodes dissolution.

The city of Cabul, the present capital of Timur Shah, is situated near the foot of the Indian *Caucasus*, or *Hindoo-Kho*; and the proximity of this ridge, occasions the most rapid changes in the temperature of the atmosphere. Its situation is spoken of in terms of rapture by the Indian historians; it being no less romantic, than pleasant: enjoying a wholesome air, and having within its reach, the fruits and other products both of the temperate, and the torrid zone. In a political light, it is considered as the gate of India towards Tartary: as Candahar holds the same place, with respect to Persia.

It was found necessary to anticipate the subject of the roads and passes, between Cabul and the Panjab country; in order to explain, with more effect, the march of Timur: and to this discussion (page 113, *et seq.*) we beg leave to refer the reader. It is there stated, that the country of Cabul is divided into two parts, by a ridge of snowy mountains, which extends from east to west, from the Indus to the neighbourhood of Ghizni. Also, that a doubt existed whether the ridge terminated *there*, or joined the mountains that are known to lie on the south of Candahar. By the course of the river of Ghizni, described in the *Ayin Acbaree*, and in the Turkish geography, quoted by D'Anville; it must force a passage through those mountains, supposing the continuity to exist.

Between the mountains of Hindoo-Kho, and those of Candahar, the country takes the form of an extensive valley, from Cabul to the borders of Korasan. Mr. Forster reports, that he crossed no ridges of mountains, within this space: and the *Ayin Acbaree*, in describing the different roads that lead from Cabul to Turan (that is Transoxiana), mentions one, by way of Candahar and Korasan, which is "free from hills."*

It appears, that in the tract between Cabul and Candahar, the

* If this account be true, it destroys the supposition of a continuity of mountains, from the south of the Caspian sea, to India.

highest point of elevation of the country, is marked by the descent of the waters from it, in almost every direction. Our knowledge, respecting this particular, is, however, confined merely to a few leading facts. At Mooker, 42 G. miles west from Ghizni, the waters of the Turung river, incline to the west; and the Hir, Heer, or Heermund, which issues from the south of the Bamian ridge (of Hindoo-Kho), runs to the S W, towards the lake of Durrah, or Zurrah, in Korasan. The river of Balk, one of the heads of the Jihon (or Oxus), issues from the north of the same mountains; and the waters of Cabul from the east. Those of Nughz, and Ghizni, *appear* to have their sources from the same quarter, also; but we have no positive information on this head. The Ayin Acbarree, Vol. II. p. 207, speaking of Ghizni, says, "a river runs from *“north to south,* and fertilizes all the cultivated lands." And M. D'Anville (*Eclaircissements Geographiques sur la Carte de l'Inde*, page 26) quotes the Turkish geography, compiled by Kiatibchelebi, to shew, that a river of the name of *Dilen*, rises beyond, that is, to the N, or NW, of Ghizni, and receives near Kerdiz (Gurdaiz, without doubt), another river named *Semil*: after which the confluent river takes the name of *Cow*, and pursuing its course towards Nagar (Nughz), receives, near that place, another river, which comes from the quarter of Candahar. The Emperor Baber, often speaks of a river in this quarter, by the name of *Cow-mull*: but Capt. Kirkpatrick, to whom we are indebted for this information, conceived that the river *Cow-mull*, joined the Indus *below* Chowpareh. At the same time, he concludes with certainty, that the river of Nughz, which also passes by Bunnoo, joins the Indus at, or very near to, Deenkote. This is also the opinion of M. D'Anville; founded, probably, on the facts set forth by the Turkish geographer abovementioned (*Eclaircis.* p. 26). Here it is taken for granted, that the *Tshebin-kot* of D'Anville, is meant for Deenkote. I think we have here, abundant authority for believing that the waters of Ghizni and of Gurdaiz, form the great river of

Bungush, which passes by Nughz and Bunnoo, and discharges itself into the Indus, at Deenkote: and also that this river is the one named *Cow*, or *Cow-mull*, by the Oriental historians and geographers: but we are left in uncertainty concerning its sources; for the Emperor Baber's observations on the heads of the rivers, in the neighbourhood of Bamian, may, in the particular that relates to the Sinde, be understood to mean either the river of Cabul, or that of Nughz. He says, "the Sinde (that is, the Indus), issues from the mountains of Bamian; where also are the springs of the Heermund, and of the double river of Balk and Condoz (meaning the Jihon). We are assured that a person may drink, at Bamian, in the same day, out of every one of these four rivers." No one can doubt the accuracy of the Emperor Baber's information, on this subject: and therefore we may with certainty conclude, that certain streams, which communicated with each of the four rivers abovementioned, issued from the neighbourhood of Bamian: but which of the two rivers it was that ran from thence into the Indus (or which was, in Baber's idea, the Indus itself), we are not told: whether the one that passes by Cabul, or by Nughz. But the probabilities are, that the former was meant: because it is spoken of as a river of some bulk, at Cabul, and therefore must have a remote source: and because we are not certain that the Nughz river has a source so remote.

The Cabul river, as it is loosely named, throughout its course, has, nevertheless, the proper name of Kameh, or Kamah, from the neighbourhood of Jalalabad, 60 or 70 miles below Cabul, downwards to Paishawur. At Jalalabad, it is navigable for *Jalebs*, or rafts of a particular construction; and as no embarkations of the hollow kind are in use,* it seems to prove that the navigation is interrupted by *rapids*; for there can be no doubt but that the

* History informs us, that some of the Emperors have made voyages down the Kameh, on *Jalebs*: it is therefore fair to suppose, that no better kind of embarkations were to be had. For a description of these, see Mr. Gladwin's History of Jehangire's Reign, p. 110.

body of water in the Kameh is sufficient to carry boats. It joins the Indus, as we have said before, in front of the city of Attock; where, although it must necessarily have received a vast accession of water, on both sides, during its progress; yet Mr. Forster's journal reports that it is only a hundred yards wide, where he crossed it; but I suspect an error in the number. It is said to receive no less than nine streams from the southern mountains alone: * How many it may receive on the north, we are not so certain of; or at what place they fall in: but it appears probable, from the authorities which I shall hereafter produce, that all the waters, that descend from the northern mountains, between the parallel of Cabul, and the Indus, fall into the Kameh, before it joins that river. We hear of several streams that issue from these mountains: the Doabeh, Dur, or Durbund, Gulbehar, and Penishehr, are noticed in the marches of Prince Morad, or his officers: and all of them certainly run to the east. Baber says, that "the Chuganserai river comes from the N E quarter, and "joins the Baran river, in the district of KAMEH; when their "united streams take an easterly course." Further, we learn, from the same authority, that the rivers Alishung and Alunkar, which likewise spring from the mountains on the N E of Cabul, unite with the same Baran, below Munderar; which district appears to lie higher up, with respect to the course of the Baran, than Kameh does: and this last is known to lie on the north of the Cabul river, nearly opposite to Jalalabad. From which it appears, that ALL the rivers just mentioned, join in the district of Kameh; and then run eastward, or south-eastward. But it is not so clear, whether these confluent waters join the river of Cabul, above Paishawur, or whether they form a separate river, and pass by Bijore and Sewad. I think the former is the most probable; and that the confluent river receives the name of *Kameh*, from the dis-

* Kirkpatrick's MSS.

trict in which the junction takes place; and then communicates it to the Cabul river, during the remainder of its course. Whatsoever be its course, it will be seen by a reference to the map, at page 65, that either of the springs between Barnian and Chuganserai, may pass for the western head of the Indus; although the most remote of all, and the identical one meant by Baber, is probably the DOABEH, which springs from the west of Cabul.

By means of the history of the campaigns of the Emperor Baber, and of the generals of Acbar and Aurungzebe, in Bijore, Sewad, and the neighbouring provinces, much general knowledge respecting those countries, and the rivers that intersect them, is derived. Some faint light is also thrown on the latter subject, by the quotations of M. D'Anville, and M. Otter, from the Turkish geographer abovementioned; but it is, notwithstanding, still involved in some degree of obscurity. We have an account in the histories of the campaigns, of four distinct streams that take their course towards the Indus, and which appear to unite successively with the river of Cabul, before it falls into the Indus. 1st, The river that passes by the town of Bijore, 40 or 50 miles below the point, where the Baran and Chuganserai rivers are said to join (page 156); and it is *possible*, though by no means *probable*, that it may be a continuation of the confluent river. It is said to be only 70 yards in breadth, where the bridge was thrown across it. 2d, The Penjekoreh river, apparently larger than the former; which it joins at the distance of two marches, to the south-east of the town of Bijore; and, in its way, separates the province of that name, on the west, from Sewad, on the east. 3d, The Chendoul river, apparently a lesser stream than either of the others; and to be regarded as a branch of the Bijore river. And, 4th, the Sewad river, the easternmost and largest of the whole. Baber crossed it midway between the town of Bijore, and the pass of the Indus, at Nilab: and as he crossed both rivers, we have a very reasonable proof that the Sewad river (the *Suval* of Otter, and D'Anville), is a distinct river from

the Sinde, or Indus: for had they been one and the same stream, Baber would of course, after crossing it the second time, have been on the same side of it, as before he first crossed it; that is, on the west, or opposite side to the Panjab: whereas the history informs us, that after the second crossing, at the distance of three marches from the first, he was on the eastern, or Panjab side of the Indus. In the course of another expedition, Baber came to the Sewad river, at a place above the city or town of Mashanagur, or Ashenagur, in two *long* marches from Bijore. We shall presently shew that Ashenagur, applied to the province, is another name for Sewad.

The Turkish geographer quoted by D'Anville, says, that the Penjekoreh river is joined by another, that comes from the mountains of *Kuber*, on the east; and that the *Hezaree* river (which is understood to be that of Cabul, or the Kameh), joins this confluent stream, a little farther down (*Eclaircis*. p. 24). This account appears to be plainly descriptive of the confluence of the Penjekoreh, and Sewad rivers (the latter of which is known to come from the quarter of KUTTORE, on the north-east, or north of Sewad; and may be the country intended by KUBER); and also of those waters with the river of Cabul; but what follows concerning the position of Ashenagur, is not so clear to me: for I conclude that it stands at, or near, the conflux of the Penjekoreh and Sewad rivers; and being only two marches from Bijore, the position assigned it in page 25 of the same book, must be erroneous: * for the point of junction of the Cabul river with the Indus, is six marches from Bijore. +

The information respecting the province of Ashenagur, in the

* As the book is very scarce, I quote the passage: "Ashungur est une autre grande ville, qui donne même son nom à une province particulière. Elle est située, selon le même géographe, dans l'endroit où la rivière de Hezare (qui est celle de Kabul) se joint avec l'Indus—Il est mention de Suvar, comme d'un canton du pays d'Ashnagur, dans le même géographe Turc."

+ Kirkp. MSS.

same page, is very interesting: for by that we learn, that Sewad (or *Suvat*, as it is there written) was part of the ancient province of Ashenagur; and it will be found to correspond with the situation of the country of the *Afsacani*, in which Alexander warred, on the west of the Indus.

Bijore, called also Bejour, and Bajour, is a geographical position, on which the right distribution of the space, between Cashmere and Cabul depends. We have seen that it lies at the distance of six of Baber's marches from the Indus, at the pass of Nilab; near Attock. It also lies wide of the road leading from Paishawur to Cabul, because the road to it from Cabul, lay through Kameh: and because the province in which it is situated, and of which it is the capital, borders on the north of Paishawur. The Ayin Acbaree informs us (Vol. II. p. 194.), that "a desert, 30 cosses in length, "by 20 to 25 in breadth, adjoins to the Bijore province, and is con-
fined by the *mountains*, and by the rivers of Cabul, and Sinde." The extent of this desert marks the space, nearly, between Paishawur and Bijore: for the mountains of Lungerkote (Kirkp. MSS.), are said to be 20 cosses from the city of Paishawur; and they separate the provinces of Bijore and Sewad, from that of Paishawur. The breadth of the desert, may therefore be supposed to include the space between the city of Paishawur, and the mountains of Lungerkote: and the length of it will be equal in extent to the space included between the Indus, and the farthest extreme of Bijore, westwards: this province must, therefore, have between it, and the Kameh, a space equal to the breadth of the desert.

The space occupied by the provinces of Puckholi, Beneer, Sowhad, and Bijore, collectively, throws further light on the position of Bijore town. These provinces lie in an east and west direction, between Cashmere, and Lumghan, the eastern frontier of Cabul; and their dimensions in the Ayin Acbaree (Vol. II. p. 192, *et seq.*) are as follow:

Puckholi,	-	length	35	cofses,	-	breadth	25
Beneer,	-	-	16	-	-	-	12
Sewad,	-	-	40	-	-	-	15
Bijore,	-	-	25	-	-	-	10
				116			62

The Kishengonga is said to be the eastern limit of Puckholi, in the same book; and its position is ascertained by the route of Je-hanguire, mentioned in page 136 of this work. From that point, if we lay off half the sum of the two numbers collectively, which is 89 cofses, on a supposition that some of the provinces lie with their greatest length in one direction, and some in another; yet that extent of distance will reach within 5 cofses of Jalalabad; which is known to lie nearly in the centre of the Lunghanat, instead of the eastern extremity, as this would make it. Besides, Guznoorgul province (belonging to Caferistan) lies on the west of Bijore; and between it and the Chuganserai river, which forms the N E boundary of Cabul: therefore, on the whole, there can be little doubt but that the provinces abovementioned, lie with their greatest length, in a N and S direction: and when we consider that some of them have large rivers, whose courses are in that direction, for boundaries; it appears yet more probable: for experience shews, that provinces have commonly their greatest extent, in the direction that their principal rivers take; especially when those rivers are boundaries also. Here, it is unquestionable, from the application of the given dimensions, to the existing space.

The province of Bijore being only 10 cofses in breadth, leaves little room for error, in placing its capital, when the boundaries of the province are defined; which may be accomplished by the above *data*: for it has been shewn that Bijore lies on the north of Paishawur, and at the distance of 20 cofses, or thereabouts, beyond the Cabul river; and that the western extreme is about 30 cofses from

the Indus: and this position corresponds with the distance of 62 coses, the breadth of the four provinces, collectively, from the Kishengonga to the western extreme of Bijore; and also leaves a space for the province of Guznoorgul, between its western limit, and the Chuganserai river. This then is the relative position of the body of the province; which is supposed to extend 25 coses N and S; and 10 E and W: and the town of Bijore being six marches (see page 158) from Nilab or Attock, or about 66 G. miles; this distance laid off to the centre of the province, places the capital in latitude $34^{\circ} 7'$; at 50 G. miles, N a little E from Paishawur; and the same distance, E a little N from Jalalabad.

This material point being adjusted, all the rest follow of course. Sewad, and Beneer (which last seems to be a dependency of Sewad), lie on the east of Bijore, being separated from it by the Penjekoreh river; and are bordered on the N by Kuttore, on the S by Paishawur; and on the E by Puckholi; the Indus forming the common boundary between them. In the Ayin Achbaree, the Indus is said to run through *the borders of Sewad* (Vol. II. p. 132), and in page 192, it is mentioned as one of the rivers of Puckholi, in common with the Kishengonga and Behut. We may therefore very safely conclude, that the Indus takes its general course *between* the provinces of Puckholi and Sewad; and the extent of the former being known, we are enabled to fix the general course of the Indus in this place.

Sewad and Bijore are exceedingly mountainous, and abound with passes, and strong situations: so that their inhabitants have not only held themselves generally independent of the Mogul emperors, but have occasionally made very serious inroads into their territories.

The Yusuf-Zyes, a numerous tribe of Afghans, quitted (says Mahomed Cazim) their ancient habitations between Ghizni and Candahar, and after various unsuccessful attempts to obtain a settlement in Cabul (at the time when Mirza Ulug Beig, surnamed

Cabulee, ruled that kingdom), finally established themselves in Sewad and Bijore; which, at this period, were governed by a dynasty of princes styled SULTANI, who derived their lineage from Alexander the Great.* It will be remarked, in its place, that Bijore is certainly the *Bazira* of Alexander, and that the celebrated rock of *Aornus*, ought to be situated either in Bijore, Sewad, or the adjoining country of Kuttore: therefore, this, and the following information concerning the descendants of Alexander, or his followers; ought not to be rejected as fabulous: for it certainly obtained belief, not only from Mahomed Cazim, but from Abul Fazil, the author of the *Ayin Achbaree*; and from Soojan Rae also.† I shall not offer any apology for transcribing Capt. Kirkpatrick's sentiments on this subject; as his knowledge of the original authors whom he quotes, is so extensive and accurate.

" A circumstance serves to confirm your opinion respecting the
" *Bazira* of Alexander.

" There is a certain tribe at this day, inhabiting modern Bijore
" (or at least there was, not long ago), who pretend to be the de-
" scendants of certain persons belonging to that conqueror's ar-
" my; who, they say, were left there, when he passed through that
" country. Both *Abū Fuzul* and *Soojan Rae* report this tradi-
" tion, without any material variation. The latter, indeed, adds,
" that these Europeans (if we may call them so), continued to pre-
" serve that ascendancy over their neighbours, which their ances-
" tors may be supposed to have possessed, when they first settled
" here. Now, although we should reject this pedigree, as false,
" yet the bare claim to it argues a perfect conviction in the minds
" of the natives (which they must have some sort of foundation
" for), that Alexander not only subjected Bijore, but also trans-
" fered his conquests to some of his own countrymen. For what
" *Abū Fuzul* has said on this subject, see page 194 of the 2d vol.

* Kirkpatrick's MSS.

† Ibid.

" of the Ayun Akbari: where, by Sultan SECUNDER ZULKERMAIN
 " (which ought to have been printed ZUL KERNINE),* is meant
 " ALEXANDER THE GREAT."

It will be proper also to transcribe the passage just alluded to.
 " The whole of this sircar (Bijore) consists of hills and wilds; and
 " is inhabited by the tribe of Yusuf-Zye. In the time of Mirza
 " ULUG BEIG, the tribe of Sultan, who assert themselves to be the
 " descendants of the daughter of Sultan Secunder Zul Kermain,
 " came from Cabul, and possessed themselves of this country.
 " They say that Secunder left treasures in Cabul, under the care
 " of some of his relations; and some of their descendants, who
 " carry their genealogical table in their hands, now † dwell in
 " the mountainous parts."

It will be perceived that Mahomed Cazim, and Abul Fazil, differ in the chronology of this point of history: the one referring the migration of the Yusuf-Zyes, to the same point of time, which the other fixes, for the migration of the Sultani.

The Yusuf-Zyes possess, in addition to Sewad, and Bijore, the tract situated between those provinces, and the rivers of Cabul and Indus; the greatest part of which is described as a desert in the Ayin Achbaree, but by Bernoulli, as a forest. On occasion of their infesting the communications between the Panjab and Cabul, in the time of Aebar, Zine Khan was sent to chastize them; which he appears to have done effectually. He over-ran their whole territory, and even penetrated to the borders of Cashgar; where he took the strong fort of Kushal, or Gushal, situated on a mountain, 17 marches north of Bijore. From the nature of the country, these marches are said to have been very short; and they might also have been very circuitous; so that we can form only a very general idea of the situation of Kushal, from them: but as the garrison retreated towards Badakshan, *over the river Chuganserai*,

* That is, the two-horned.

† In the latter part of the 16th century.

we may collect, from the course of that river (page 151), that Kushal bears to the west of N from Bijore; and may probably be less than 70 G. miles from it. Nor ought we to be surprized, at finding Cashgar (or rather its dependencies) in this position; for the Ayin Acbaree mentions it, as lying on the north of Sewad and Bijore, &c. Munglore, the capital of Sewad, is said to be near a pass, which *adjoins to Casgar*. Vol. II. p. 193.

Aurungzebe also found it necessary to chastize the Yusuf-Zyes (about the year 1670); since which, the return of Nadir Shah in 1739, again brought them into notice. They appeared formidable, even to the Shah; but according to Abdul Kurrim, page 7, he reduced them to submission: and if they really engaged to supply his army with 30,000 men, the tribe must have increased since the time of Achar; when Bijore contained only 39,000, and Sewad 40,000 families. (Kirkp. MSS.)

Kuttore appears to be the general name of the tract bordering on the north of Sewad, Bijore, Puckholi, &c. from the N E frontier of Cabul, to Cashmere. It has also obtained from the Mahomedans, the name of CAFERISTAN, or Land of Infidels. It is clasped (we have seen) as a dependency of Cashgar, by the people of Hindooostan; but seems to have been very little known to them. It occupies, as we have before observed, nearly the place of Ptolemy's *Comedi*; and answers to it in description, being entirely mountainous. The expedition of Timur to the mountains of Kuttore, is particularly described by Sherefeddin, and translated by M. Petis de la Croix: besides which, Capt. Kirkpatrick has communicated translations of his own, both of that, and of certain passages in other authors, descriptive of the country of Kuttore, and its inhabitants.

Timur proceeded from Anderab in Badakshan, to Kawuck, or Khawick; the furthest, or most eastern, of the passes leading through Hindoo-Kho, into the province of Cabul. In order to arrive at the fortress of Kuttore, he crossed several ranges of high

mountains, rising one above another; some of them covered with snow: and the fortress is described as being near the foot of the furthest range; having a river of great depth and rapidity, passing close to its walls. It may be supposed that these ranges of mountains are the continuation of Hindoo-Kho, from Kawuck; and then Kuttore will lie to the south of that range: but the distance of it from Anderab, cannot easily be made out. Capt. Kirkpatrick's translation, allows 18 days from the time of Timur's departure from Kawuck, to his return thither, by a different route. From the history of his transactions, he might be in motion 12 days of the time; which allows 6 marches in distance: but the nature of the country would not admit of more than 40 to 45 G. miles of direct distance, for these marches from Kawuck; and this last may be 60 from Anderab: whence, I suppose, Kuttore fort may be 100 to 105 G. miles to the E by S, or E S E, of Anderab; and about the same distance, in a N E direction, from Cabul. But this position, as the reader may perceive, has more of conjecture, than of authority, for its basis. The Kushal of Zine Khan, is not far from Kuttore, according to my supposition.

The author of the *Dil Kusha* (according to Capt. Kirkpatrick), describes the mountains of Kuttore as stretching from the borders of Cashmere to Cabul. Alishung and Alunkar, the districts alluded to, in page 151, were included in it, in the time of Baber; as Guznoorgul was, when the Ayin Acbaree was compiled: to which may be added, that the proximity of Kuttore, to Lumghan and Jalalabad, is presumed, from the circumstance of Acbar's sending off a detachment from the latter (when on his return from Cabul), to scour the skirts of the mountains of Kuttore. (Kirkpatrick's MSS.) The author of the *Dil Kusha* also says, " This region (Kuttore) contains a great number of towns and villages and is exceedingly populous. Its principal towns are Tow-kul (written in another MS. Showkul), and Jourkul; those being the residencies of its rulers. It abounds in fruits, such as

" grapes, apples, plumbs, &c. It likewise yields rice, wheat, " and other sorts of grain. The natives are exceedingly fond of " wine and hog's flesh; although their country is well stocked " with cows and goats. They have a distinct language, nothing " resembling that of any other people: and their arms consist of " the bow and arrow, the sabre, and the sling." Another author adds, " That the natives are, for the most part, idolaters; that " they are of a robust make, and that their complexion is a mix- " ture of red and white." Sherefeddin, Capt. Kirkpatrick observes, " says nearly the same thing."

We have here, a second instance of a distinct race of people in the same neighbourhood: for the Bijorians and Sewadians (as we have seen), border on Kuttore.

The Siahposhians (or Black Vests) bordered on the north of Kuttore; since Timur on his route from Anderab to Kuttore, sent off a detachment to the *left*, that is, to the N E (as he went himself to the E, or S E), and this detachment penetrated into their country.

On the south and south-west of the province of Cabul, our knowledge is very limited. The roads from Ghizni to Candahar, and from the latter to Moultan; are all the geographical lines that we possess in that quarter. The latter is from a march of Dara Sheko; and from it we learn, that the mountains of Suliman-droog, occur, at about 4 marches from Candahar; but that the rest of the road is more smooth and even, than that leading to Cabul, from Attock. The mountains of Wulli, covered with snow, were left to the north; but our knowledge of the geography of this part, is much too scanty to allow us even to venture an opinion, on the general direction of the ridges of mountains: we learn, however, from the journal of Mr. Steele (1614), who went by the direct road (it would appear) from Moultan to Candahar; that a large tract of mountainous country lay in his way; and also a river of the name of Lucca, which is not heard of, in Dara Sheko's

route; and therefore, probably joins the Indus, to the N of Dara's route. The Indus required 92 boats, or pontoons, for its bridge, where Dara crossed it; and the Moultan river 65: and the rivers were then low. It does not, however, follow, that the breadth of the rivers bore an exact proportion to the number of boats; but we may conclude that the Indus is the widest river of the two.

The boundary of Moultan on the west; and the tracts occupied by the Balloges (or Bulloaches), and the Abdalli tribe of Afghans, in the line of Dara's route, are taken from Capt. Kirkpatrick's MSS. From him also we learn, that Dara sent his heavy artillery, for the siege of Candahar, in boats, from Lahore to Kun, or Ken, on the Indus; whence they were transported by land by Seewee and Deháoo, to Candahar.

Candahar, while the Persian and Mogul empires were severally undivided, was the frontier city and fortress of Hindoostan, towards Persia; and was esteemed the key of the western provinces of the latter; and not unfrequently changed masters. The Ayin Acbaree classes, as belonging to Candahar, several provinces on the west of it, which unequivocally belong to Persia: but as the limits of the empire, varied with the prowess and abilities of the different emperors, it may be concluded that Acbar extended them to the utmost.

The position of Ghizni, the ancient capital of the kingdom of the same name, is totally different from what M. D'Anville supposed; for he placed it in the N W extreme of Cabul: although it appears to be almost in the very heart of that province.

Ghizni is termed THE SECOND MEDINA; owing to the great number of illustrious persons, whose remains have been interred there. Wonderful stories are related concerning its extent and population, in ancient times: yet Baber expresses his surprize at its having ever been pitched on, for the seat of any empire.*

Although this was the part of India, the first known to Euro-

* Kirkpatrick's MSS.

peans, yet at this day, we know less of it, than of most other parts; nor ought it to excite surprise; for the modern Europeans have visited India, on a very different errand than what Alexander did: ours being purely on the score of maritime trade, until the downfall of the Mogul empire, opened the way to the acquisition of territory: and that in the opposite corner of the empire. This may serve to explain the cause of the great deficiency of geographical materials, for the tract in question: notwithstanding the aids that the science has received, from the labours of gentlemen, whose assistance I am proud to acknowledge.

I have generally availed myself of the laborious researches of M. D'Anville, to introduce several places, whose names he has identified on the authority of the Turkish geographer beforementioned, whose works I am unacquainted with. Those who wish for more particular information, may consult his map of Asia, published in 1751; as also his *Eclaircissements*,* which accompanied that, and the map of India; the first section of which, is particularly curious, and applies directly to this subject. His *Antiquité Geographique de l'Inde*, deserves attention likewise: though I confess I cannot follow Arrian in his *detail* of Alexander's marches, in the countries bordering on the west of the Indus, for want of such unequivocal marks, as are to be found on the east side of that river, in the courses and confluences of the Panjab rivers. However, by the aid of Capt. Kirkpatrick's communications, and of the Ayin Acbaree, several positions in the march of Alexander may be ascertained: in particular, the second volume of that elaborate compilation, under the heads of Cashmere and Cabul, gives the names, dimensions, and relative positions, of the subdivisions of those countries; of which I have availed myself, throughout the geographical construction. I suspect that Alexander never went so far to the north as the city of Cabul; and that, although

* This work is become very scarce, and might be reprinted, with emolument to the publisher.

his route is generally represented as very circuitous, and even traversing the country from one extreme to the other; yet I apprehend, on the contrary, that he made no considerable deviations from his intended line of march, from the foot of *Caucasus*, or *Hindoo-Kho*, to the Indus, near *Peucelaotis*; or Puckholi. I shall endeavour to trace his route generally, from the river *COPHENES*, that being the first point, according to my idea, that can be recognized. There seems indeed, to have been few doubts entertained, concerning the position of the *Paropamisan Alexandria*; which has been referred to Candahar, by M. D'Anville, and many other geographers: and, I confess, I was decidedly of the same opinion, until Capt. Kirkpatrick's communications gave me a better idea of the position of Candahar, in respect of Hindoo-Kho (Alexander's Caucasus), and of both of these, in respect of Balk, Cabul, and Bamian: and finding that Candahar is at a great distance to the southward of that ridge,* whilst Alexandria is repeatedly said to lie at the southern foot of Caucasus, I ought according to the history, to look for it in some other position. That position, however, I have not been able to find: and the only facts that I can collect, towards enabling me to form any idea of the general position of *Alexandria*, are the following.

Alexander's route from the south coast of the Caspian sea, was through *Aria*, *Zaranga*, &c. to *Arachosia*; answering to Herat, Zarang, and Arokhage; † the latter of which lies to the south of Candahar. From Arachosia, he went into the *adjacent country of the Indians*; which answers, I conceive, to Cabul and Ghizni: for no district, lying west of the Ghiznian province, can well be clasped amongst those of India. In his way from the Arachoti to the Indians, he went through deep snows; that is, I suppose, over

* Or rather the continuation of Hindoo-Kho, westward, under the name of *Gau*: and which answers in position, to *PAROPAMISUS*.

† The names of places, in the map of the tract situated between the heads of the Ganges and Indus, and the Caspian sea, at page 200, are given according to the ancient, as well as the modern, acceptation of them. The ancient names of towns have a dash under them: and those of provinces are in italic capitals; whilst the modern ones are in Roman capitals.

high mountains covered with snow; for the latitude is between 32 and 34 degrees; and there is no question, concerning the existence of high mountains on the south, and S E of Candahar. Taking for granted that mountains were passed over, we may suppose them to be a continuation of the heights of Suhmandroog, noticed in the march of Dara Sheko (page 166), and probably the *Parvati Mons* of Ptolemy.

From the country of the Indians, Alexander marched toward BACTRIA; in pursuit, or rather in quest of, Belsus. Mount Caucasus lay in his way to Bactria: and this country, from the circumstances of name, and position, answers most perfectly to that of Balk. Now, in order to form a judgment concerning the site of Alexandria, we ought, I think, to inquire where the passes, leading directly from the country of the Indians, to Bactria, over mount Caucasus, are situated; for in that line of direction ought Alexandria to lie, according to the history. The passes then will be found between Ghourbund, and the quarter of Bamian; that is, on the N W and west of the city of Cabul; and much to the east of Candahar. The course of the river *Cophenes*, ought to afford some assistance at fixing Alexandria. It ran between Alexandria, and the first scene of the military operations of Alexander; and probably occurred pretty early in the march. In Alexander's arrangement of boundaries, the river *Cophenes* was the eastern limit of the province of *Paropamisus*; of which Alexandria was regarded as the capital: and that province, according to the ideas of Ptolemy, lay between those which the moderns name Korasan, and Cabul. I conclude, with some degree of confidence, that the river Cow, of the Turkish geography, and the Cow-mull of Baber (see page 154), which passes by Nughz, and whose principal branches are the rivers of Ghizni and Gurdaiz; is the *Cophenes*, in question: and then we must look for Alexandria in the quarter of Bamian; but its particular situation, it is impossible to guess. At all events, the proximity of Alexandria to the northern moun-

tains, a fact which Arrian impresses very strongly,* renders it an almost impossible case, that Alexandria and Candahar can be one and the same place. †

We shall take occasion to mention, in its place, another fact respecting the Cophenes, which affords a strong presumptive proof, that it can be no other than the river of Nughz. It is unfortunate, that neither Mr. Forster's journal, nor Col. Popham's MS. give the particulars of any of the rivers on the road between Cabul and Candahar: the latter indeed notes no less than five streams that cross it: but leaves us in uncertainty as to their bulk, names, and future course.

Leaving Alexandria, at the foot of Caucasus, Alexander came to the river *Cophenes*; which we have supposed to be the *Cow*, or *Cow-mull* river, that runs under the city of Nughz: and he must have passed it, in the higher part of its course; otherwise the snowy ridge that divides Lumghan from Bungush, would have lain between him, and Bazira: and no notice is taken of his crossing so remarkable a chain of mountains. We may add, that only the uppermost part of the course of the Cow river, crosses the roads, leading from Hindoo-Kho, to the Panjab country. From the Cophenes river, Hephestion and Perdiccas, with a strong detachment, were sent into the country of *Pewclaoitis* (according to Arrian; *Pewcolaitis*, Strabo), near the Indus; where they were to make preparations for passing the army over. This country, in name and situation, agrees nearly with the modern Puckholi, called also *Pebkely*, lying on the north of Attock; and although the whole province, now lies on the east of the Indus, according to the state of our information; yet as we have said before, in

* In one place (Book IV.) he says that Alexandria was built amongst the *Paropamisse*; and that Alexander in his way to it, from the Oxus, crossed mount Caucasus. And in the preceding book; that Alexander marched to mount Caucasus, and built a city, which he named Alexandria.

† The ancient name of Candahar is said to be *Balioas* (Kirkpatrick). Thus, the popular derivation of Candahar from Iskander, or Alexander, must be wrong. Besides, there is a place named Kandar, or Kondar, in the heart of the Deccan; where it never was pretended that Alexander came. See D'Anville's *Eclaircis*, page 19.

page 147, the striking resemblance in the name, and general situation; together with the probability of some variation in the limits, in the course of so many ages (and which is exemplified in those of Cashmere, in page 141; and of Cabul, in page 151); altogether makes me conclude that it is one and the same country; and that its capital stood near the western shore of the Indus; although it now stands at a very considerable distance, to the east of that river: for we find by the history, that the *Assaceni*, or *Assacani*, answering to Ashenagur (synonymous with Sewad); and *Bazira*, which answers to Bijore; adjoined to, or lay very near to *Pencelaotis*; as Sewad and Bijore do now to Puckholi.

Hephestion's stay at Pencelaotis must have been very considerable, previous to Alexander's arrival: as on occasion of the revolt of the prince of that country, the siege of his capital took up 30 days. Alexander himself marched from the banks of the Cophenes, against the *Aspii*, *Tbyræi*, and *Arasaci*; nations, whose situations, and modern names, I am utterly ignorant of (unless Teerah should be meant by Thyra); but I conclude that they were inferior divisions of the modern Cabul, and situated between the rivers of Ghizni and Cabul, at the height of Irjab and Dukkah. The nature of the country, described in the history, points to this neighbourhood; it was rough and mountainous, but not impracticable to cavalry: and beyond these mountains was the city of *Arigæus*, which might almost pass for *Irjab*, in the route of Tamerlane, near the southern mountains. In his march to *Arigæus*, Alexander crossed two rivers, the *Choe* and *Ewaspla*; and defeating the Aspians in a pitched battle, near the latter, passed through the territories of the *Gurai*; and crossed the river of the same name, with much difficulty, by reason of the depth and rapidity of its stream, and the nature of its bottom; which was composed of round slippery stones. He was at this time on his way to the country of the *Assaceni*, or *Assacani*; and this is a point, at which I shall pause, to endeavour to ascertain Alexander's position,

from the nature of the circumstances relating to it. The river *Gureus*, then, appears to have been the most considerable one that occurred, since Alexander passed the *Choe*; it was deep, but yet fordable; for had his army crossed it in boats, they would either have been ignorant of the nature of its bottom; or knowing it, they could not have regarded it as an obstacle. The description, as well as the position, suits the Kameh, or Cabul river, better than any other; as far as my information goes. The *Choe* and *Euaspla*, may be two, of the nine rivers of the Lunghanat. It is very difficult to judge of the length of Alexander's march from the Cophenes to the Gureus; but possibly it might be 100 road miles.

The country of the *Afsaceni*, or *Afsacani*, answers to *Sewad* (or *Sowhad*); *Ashenagur* being, as we have observed in page 158, the ancient name of *Sewad*; or rather *Sewad* was one of the subdivisions of *Ashenagur*. At present, *Sewad* includes the three provinces of *Sewad proper*, *Bijore*, and *Beneer* (*Ayin Acbaree*, Vol. II. p. 193). Such are the mutations, in the names and boundaries of provinces, and which are often accelerated by arbitrary arrangements in revenue books! Under the circumstances of the case, it was fortunate that the original name could be traced. *Massaga*,* the capital of the *Afsaceni*, being taken by assault, Alexander summoned *Bazira*, the capital of the next adjoining territory: and here the modern district of *Bijore*, presents itself in a position that answers most unequivocally to that of *Bazira*; and the similarity of the names is no less striking. Of the position and extent of this province, we have spoken most fully in page 159. Its position becomes interesting, as it contains the famous mountain of *Aornus*, the taking of which was one of the most brilliant exploits of Alexander, in these parts. The *Ayin Acbaree* gives no intimation of its containing any such remarkable mountain; but describes it generally as a very strong country, and as

* Baber mentions a city of the name of *Massangur*, situated on the river of *Sewad*. (Kirkp. MSS.)

having fastnesses, into which the inhabitants occasionally retreat. Arrian describes its base to be 18 or 20 miles* in circuit; of vast elevation, and accessible only by one narrow path, cut out in the rock. On the summit was a great extent of arable and pasture land, with springs of water: so that a garrison of 1000 men might subsist, without any extraneous aid. We may suppose it to be somewhat similar to Gwalior,† or Rotas Gur in Bahar. The Indus does not pass near Aornus; because the district of Sowhad *proper*, lies between the Indus and Bijore, according to the Ayin Achbaree.

It appears that Alexander, after the taking of Bazira, and before he besieged Aornus (notwithstanding its proximity to the former) proceeded to the Indus, where he took possession of the city and fortres of Peucelaotis, and several small towns on, or near, that river: and as Hephestion and Perdiccas make their appearance here, I conclude this to be the city spoken of before, as sustaining a siege of 30 days; which period might possibly expire about the time of Alexander's arrival: and the surrender might have been a consequence of it.

We have supposed the country of Peucelaotis to be the modern Puckholi, and the fortres and city in question, was probably the capital of it. A slight inspection of the map, at the end of this Section, will convey a clearer idea of the relative positions of the several provinces just mentioned, than any written description: and to that I shall beg leave to refer the reader.

If I understand the matter right, Alexander left the rock Aornus behind him, as I said before, when he proceeded to *Peucelaotis*, to receive its surrender: and afterwards marched back again (that is to the N or N W) to invest the rock; taking the city of *Embolima*, which stood near it, in his way. And after the taking of Aornus, he made a second expedition into the country of the *Afsacani*,

* Reckoning ten stades to a mile.

† See the Index, article *Gwalior*.

situated between Bazira and Peucelaotis. His errand among the Afsacani (the people of Ashenagur), this second time, was to get possession of some elephants, which were said to be sent thither, to prevent their falling into his hands. It was doubtless an object to him, to be provided with a sufficient number of elephants, in order to oppose, with a prospect of success, those of his enemies, when he should arrive on the east side of the Indus. And although Alexander might, from his superior knowledge of discipline, despise the attacks of those animals, as every accomplished general in every age has done; yet from an equal degree of knowledge of the human mind, he might conclude that his soldiers in general, would feel themselves possessed of more confidence, when in addition to their ordinary means of attack, they could also employ that, which appeared the most formidable in the hands of their enemies. The elephants were at last found, in the pastures near the Indus, and sent off by land to the grand army; which we may suppose to be on their march, towards the bridge. He in the mean time, possibly tired of marching; or for the sake of novelty, wishing to embark on the Indus; caused trees to be felled, with which having constructed boats (according to Arrian), he sailed down the stream to the bridge. Possibly he made some rafts, which might be fully equal to his wants; but it is difficult to conceive, by those who are acquainted with the nature of constructing any kind of boats, that he either waited to build them, or that he carried with him the requisites for their equipment, on so sudden an emergency.

I have before (page 191) supposed Attock to be the place where Alexander crossed the Indus: and over and above the reasons there assigned for it, I will now add another; which is, that after he came to the bridge (which was completed before his arrival), he made an excursion by land, into the country adjacent to the western bank of the Indus, to view the city of *Nysa* (supposed by D'Anville to be Nughz, or Nagaz, the *Nagara*, or *Dionysiopolis*, of Ptolemy); and he is then said to have entered the country, that

lay between the two rivers, Cophenes and Indus. We have before taken it for granted (page 170), that the Cophenes is the river that runs by Nughz, and falls into the Indus, 30 or 35 miles below the city of Attock; and as the river of Cabul joins the Indus in front of the city of Attock, it is clear that until he came opposite to that city, he could not be between the Cophenes and Indus. And if it be said that the Cabul river, was the Cophenes, he had all along been between the Cophenes and the Indus; and Arrian's words could have no meaning. But it is probable, on every account, that Attock was the crossing-place: there the mountainous country from the north-east terminates, and the plains of the Panjab begin; a circumstance highly favourable to his future plan of penetrating into India, and no less so to the construction of his bridge; which was no easy matter to accomplish, across a river so wide and so rapid as the Indus; but which was less difficult in a level country, than in a mountainous one. The bridge was undoubtedly made of boats, as Tamerlane's was, in 1398: but Tamerlane crossed at a season when the river was (comparatively) low; Alexander, after it was considerably swoln, with the periodical rains.

By Alexander's sending off Hephestion from the Cophenes, to provide the means of passing the Indus in the country of *Paeza-laotis* (Puckholi), it would appear that he had an intention of crossing it, higher up than he afterwards did: and it was natural enough, before he had learnt from Hephestion that the situation was, in every respect, unfavourable.

I return from this long digression concerning Alexander, to the account of the modern geography of the Indus, and the countries bordering on it, in the lower part of its course. I am convinced, that the more our knowledge of the particular geography of the countries, on both sides of the upper parts of the Indus, increases; the clearer will be our ideas of Alexander's marches. The commentaries of the Emperor Baber, quoted in the *Ayin Acbaree*,

have already proved a fruitful source of information; particularly in the province of Cabul, and its vicinity: and, I trust, that the spirit of inquiry, which has gone forth, in the countries where the events themselves were produced, will keep pace with the spirit of curiosity, which has been excited concerning them, in our own.

Of the Indus, and its principal Branches, below MOULTAN; with some Particulars relating to SINDY.

The common boundary of Moultan and Candahar, in the line between the capitals of those countries, is about 60 G. miles beyond the western bank of the Indus: as appears by the march of Dara Sheko. Our researches have scarcely penetrated into this quarter; of course we are unable to enlarge the reader's ideas concerning it: but it seems as if the country, at no great distance from the west of the Indus, partook of the nature of the adjoining province of Makran (the *Gedrosia* of Alexander), and was little better than a desert.

The best information, and which contains some very curious particulars, respecting the country of Sindy, and the river Indus; was most obligingly communicated, by a person of character and great respectability, who resided some time in that country, in the service of the East-India Company: and this shall be detailed, after the insertion of some particulars, that ought necessarily to precede it.

The general course of the Indus, from Attock to the delta, is taken from M. D'Anville's map of Asia; as I know of no better authority. The towns on its banks, are taken chiefly from the missionary's itinerary, before mentioned: as is also the point of conflux of the Setlege and Indus. The latitude of Behker, is given

at $27^{\circ} 12'$ in this itinerary; and its distance from Moultan being $106\frac{1}{4}$ royal cosses, or about 215 G. miles, in the tables; this will agree nearly to the position of Moultan, in page 91. The Ayin Acbaree says, that Behker is the ancient Mansurah. Finding Hajykan mentioned in the Ayin Acbaree, as one of the districts belonging to Sindy; and it being very certain that a large province of the same name, lies on the west of the Indus, opposite to Moultan; I can no otherwise reconcile the two accounts, than by supposing that Hajykan extends southward, along the Indus, until it meets the border of Sindy; and that a small part of it was subject to Sindy. In this case, the district of Behker must be confined chiefly to the east side of the Indus. No part of Hajykan, is reckoned to belong, either to Moultan, or Candahar, in the Ayin Acbaree. The missionary's itinerary (1662) mentions the Balloges, as the then possessors of Hajykan: and we have supposed that the *Orykani* are intended for the inhabitants of the same country, by the historians of Alexander, in page 129.

Moultan is nearly at the same distance from the sea, as Allahabad; that is, from 800 to 850 B. miles, by the course of the river: and the missionary's party were 21 days in dropping down with the stream, in the months of October and November; when the strength of the land floods was abated.

The Indus, and its branches, admit of an uninterrupted navigation, from Tatta, the capital of Sindy, to Moultan, and Lahore, for vessels of near 200 tons; and a very extensive trade was carried on between those places, respectively, in the time of Aurungzebe: but, at present, very little of this trade remains, owing to a bad government in Sindy; and probably to the hostile or rapacious disposition of the Seiks; the present possessors of the countries of Moultan and Lahore. Capt. Hamilton says, that boats came from Lahore to Tatta, in 12 days. Had Ferose's canal been completed, there would have been a continued inland navigation, from Tatta to Bengal, and Afsam. (See page 75.)

The geographical position of Tatta, and those of the principal mouths of the Indus, depend on that of Cape Monze, as set forth in page 37 of this Memoir; or rather as it was meant to be; for the latitude of this cape, should have been $24^{\circ} 55'$, instead of $24^{\circ} 45'$. The mouth of Ritchel river, taken at $24^{\circ} 14'$; and that of Larry-Bunder, which was the principal channel of the Indus, during the last century, and early in the present one, at $24^{\circ} 44'$; are respectively within one or two minutes of the latitudes assigned them: the first, by an observation of Capt. Scott (which was $24^{\circ} 12'$); and the latter by the East-India Pilot.

The city of Tatta, the capital of the province of Sind, and supposed to be on, or near the site of the *Pattala** of the ancients, is situated, according to the idea of the gentleman who resided there, and whose observations have proved of such singular use, about 38 G. miles to the north of Ritchel, and 50 to the east of it: so that it ought to be in lat. $24^{\circ} 50'$, lon. $67^{\circ} 37'$; and about 125 miles from the sea, by the course of the river.† According to M. Thevenot, it is three days journey from Larry-Bunder town; which, according to Capt. Hamilton, is five or six leagues from the sea. M. Thevenot's three days journey may be taken at 54 G. miles of horizontal distance; and the whole distance of Tatta, from the mouth of Larry-Bunder river, at about 68 G. miles: and this does not disagree with the account given above.

According to a MS. itinerary (kept by N. Whittington, no date

* It is impossible to fix the exact site of *Pattala*, because there are properly *two deltas*, a superior, and an inferior one; exclusive of the many islands formed by the Indus, when it approaches the sea. Tatta is near the head of the *inferior delta*; and the ancient accounts mention only one great delta, having *Pattala* at the upper angle of it. In Ptolemy's map (Aiaz, Tab. XX.), *Pattala* is placed very far below the place where the Indus begins to separate into branches.

† These are the particulars: From Ritchel to Shabnsid, about 40 miles by the course of the river, the bearing, much eastwardly. Thence to Aurungabunder, 25 more (but by land only 10 or 12), the course somewhat more northwardly. Thence to Tatta, 60 miles, NNE, or NE by N. The windings of the river are supposed to reduce the distance, on a straight line, to 63 G. miles. The latitude of Tatta, is supposed to be something more than $24^{\circ} 45'$: the construction, according to these data makes it $24^{\circ} 50'$.

to it). Tatta is about 180 coses from Radimpour on the Puddar river: and 228 from Amedabad, passing through Radimpour. This last town is placed in the map, chiefly on the authority of a MS. map of Guzerat (of which more will be said hereafter); and 180 coses, laid off from it, would place Tatta about 22 G. miles further to the west, than the position assigned it, above; provided that the general direction of the road, was straight; but it appears by the ideas of Jansen and Blaeu, who have severally described this road, that it bends greatly to the south; and therefore will accord very well with the above *data*: and it may be concluded, on the whole, that the longitudes of Tatta and of Cape Monze, are not far from the truth. The route in question, goes by the village of Negar-Parkar, and by the town of Nuraquimire; and through part of the territory of Cutch: it also crosses the great sandy desert.

It is not to be expected that any particular account of the number and positions of the several branches and mouths of the Indus, should exist, unless a survey of them had previously been made. All the information that I have been able to obtain on the subject, respects three of them only; and is as follows. About 170 miles from the sea, by the course of the river, the Indus divides into two branches; of which the westermost is by much the largest. This branch, after a course of about 50 miles, to the SW, divides into two more; the smallest of which runs on a WSW course, to Larry-Bunder, and Darraway: and the largest, taking the name of the Ritchel river, runs on a more southwardly course to the town or village of Ritchel, on the sea coast. (Tatta is situated within this inferior delta, and about five miles below the upper angle of it.) The other principal branch remains to be mentioned, and is that which bounds the eastern side of the superior delta; separating, as is said above, at about 170 miles from the sea. It is smaller than the Ritchel river, but larger than that of Larry-Bunder; and by cir-

cumstances, and by report, it opens into the mouth of the gulf of Cutch, nearly opposite to Jigat Point: its course being somewhat to the eastward of south.

From these *data*, together with the aid of the charts of the coast, published by Mr. Dalrymple, it may be collected, that the delta of the Indus is about 150 British miles in length, along the sea coast; and about 115 in depth, from the place of separation of the superior branches of the river, to the most prominent point of the sea coast. Arrian (after Nearchus) reckons the first distance 1800* stadia; and Pliny 220 Roman miles: that is, he reckoned about eight of those stades to a mile.

The lower part of this delta is intersected by rivers and creeks, in almost every direction, like the delta of the Ganges: but, unlike that, it has no trees on it; the dry parts being covered with brushwood; and the remainder, by much the greatest part, being noisome swamps, or muddy lakes. A minaret, at the mouth of Ritchel river serves as a mark for the road; which, from the flatness and sameness of the appearance of the coast, could not otherwise be discriminated. The upper part of the delta is well cultivated, and yields abundance of rice.†

From the ideas generally entertained concerning the nature, and treatment of camels, it would not be expected, that this delta; and especially that part of it, nearest to the sea; should be set apart for the breeding of those animals. It is, however, the case; and the tender parts of the brushwood, serve them for fodder.

It is a remarkable circumstance that the tide should not be visible in this river, at a greater distance than 60 or 65 miles from the sea. The *boreas* are high and dangerous in the mouths of the river. (See the Introduction, page xxiv.)

The breadth of the Ritchel branch is estimated at one mile, just

* It appears from Strabo, that Aristobulus allowed only 1000 stadia for the basis of the delta.

† The Ayin Achbarec says, that the principal food of the inhabitants of Sindy, is fish and rice.

above the tide; and at Tatta, at only half a mile.* It is certain that the Indus is very considerably less than the Ganges. The velocity of its current is estimated at four miles *per hour*, in the dry season; which I should suppose to be over-rated, unless the declivity be much more than I have an idea of: though indeed, the short course of the tide, upwards, seems to require some such cause.

The province of Sindy, in many particulars of soil and climate, and in the general appearance of its surface, resembles Egypt: the lower part of it being composed of rich vegetable mould, and extended into a wide delta; while the upper part, is a narrow slip of country, confined on the Persian side by a ridge, or ridges of mountains, and on the other by a sandy desert; the river Indus, equal at least to the Nile, winding through the midst of this level valley, and annually overflowing it. During great part of the SW monsoon, or at least in the months of July, August, and part of September (which is the rainy season in most other parts of India), the atmosphere is here generally clouded; but no rain falls, except very near to the sea. Indeed very few showers fall during the whole year. Capt. Hamilton says, that no rain had fallen, during the three years preceding his visit to Tatta. Owing to this, and to the neighbourhood of the sandy deserts, which bound it on the east; and are not far removed from it, on the north-west; the heats are so violent, and the winds from those quarters so pernicious, that the houses are contrived so as to be occasionally ventilated, by means of apertures on the tops of them, resembling the funnels of small chimneys. When the hot winds prevail, the windows are closely shut, by which the hottest part of the current of air, (that nearest the surface, of course) is excluded: and a cooler part, because more elevated, descends into the house, through the funnels. By this means also, vast clouds of dust are excluded, the entry of

* Hamilton reckoned it a mile broad, in 1699; and says it was six fathom deep; and that the inundations are in April, May, and June.

which alone would be sufficient to render the houses uninhabitable. The roofs are composed of thick layers of earth, instead of terraces. Few countries are more unwholesome to European constitutions; particularly the lower part of the delta.

Sindy extends along the course of the Indus from its *embouchure*, to Belker, or Bhakor, on the frontiers of Moultan; and may be reckoned at least 300 B. miles in length, that way. Its breadth is very irregular: it may be about 160 miles in the widest part. On the N E, lie the territories of the Seiks; and on the north, those of the King of Candahar; on the west is Makran,* a province of Persia, whose prince is tributary to the King of Candahar. A sandy desert bounds Sindy on the east, and extends the whole way from the territory of Cutch, to the confines of Moultan; being near 550 B. miles in length, and from 100 to 150 wide. P. Wendell, in his account of the Rajpoots' country (or Rajpootana) says, that the country begins to grow sandy, immediately on the west of Agimere: so that the desert must be exceedingly wide in that part. This is the sandy desert mentioned by Herodotus, as the eastern boundary of India. See page xxii of the Introduction. The fort of Ammercot, the retreat of the Emperor Humaioon, and the birth place of his son Acbar (page lvii) is situated within this desert. In the Ayin Achbaree, it is clasped as belonging to the Nusserpour division, of the province of Sindy: Ferishta reckons it about 100 cosses from Tatta. It may reasonably be supposed, that this desert contains many habitable tracts, or islands, within it; like the OASES† of the Lybian deserts.

The city of Tatta, the position of which we have described above, was, in the last century, very extensive and populous, and was a place of great trade; possessing manufactures of silk, carmania wool, and cotton: and was also celebrated for its cabinet ware.

* Makran, or Motran, we have supposed to be the ancient GEDROSIA. One of its modern names is *Kidge*, or *Kedge*, and is often prefixed to the other, as *Kidge-Makran*. If *Kidge*, or *Kedge*, was in use anciently, it is likely to have given rise to the name *Gedrosia*.

† See Savary's Letters on Egypt.

Little of those now remain; and the limits of the city are very much circumscribed. On the shores of the Indus, above the delta, considerable quantities of saltpetre are made: and within the hilly tract, which commences about three miles on the NW of Tatta, are found mines of iron, and salt. The ruins of a city, supposed to be Braminabad, lie within four miles of Tatta.

The reader will be pleased to recollect, that Nadir Shah, in 1739, obtained from the Great Mogul, Mahomed Shah, a cession of the province of Sindy, as well as the rest of the Indian provinces, lying on the west of the Indus: and he even visited Tatta. Abdalla, when he seized on the provinces, which compose his present empire, retained the sovereignty of Sindy also: and the prince of this province, is, accordingly, tributary to the present King of Candahar, Timur Shah.* The prince is a Mahomedan, and of Abyssinian extraction: his usual place of residence is at the fort of Hydrabad, situated on the Indus, not far above the head of the delta; and in the neighbourhood of the city of Nusserpour. The Hindoos, who were the original inhabitants of Sindy, and were reckoned to outnumber the Mahomedans, in the proportion of 10 to 1, in Capt. Hamilton's time, are treated with great rigour by their Mahomedan governors; and are not permitted to erect any pagodas, or other places of worship: and this severity drives vast numbers of them into other countries.

The gentleman to whom I am indebted, for the chief part of my information, on the present subject, went up the Indus as far as the city of Behker, which is about two-thirds of the way to Moultan. He observed the moveable towns or villages on the banks of the river (noticed by Nearchus, and the Ayin Aebaree: see Introduction, page xxx). Some of these are the habitations of fishermen, and others of graziers: and they are constantly changing

* Mr. Frazer, in his account of Nadir Shah, gives a copy of this partition treaty, by which the Nulla Sunkra, or Sunkra river, was to be the common boundary between Hindostan and the Persian provinces, near the mouth of the Indus. It may thence be inferred, that the eastern branch of the Indus is named Sunkra.

their positions, like a camp. Few rivers abound more with fish, than the Indus does; and among these, are some very delicious sorts.

Among the various tribes, that inhabit the hilly tracts, bordering on the western side of the Indus; there is, according to my friend's account, one of the name of *Nomurdy*. They are of the Mahomedan religion, are freebooters, and very troublesome to the villagers, and travellers. The *Ayin Achbaré* also takes particular notice of this tribe; and states its strength to be 7000 infantry, and 500 horsemen (about the year 1560). This being a part of the tract named *INDO-SCYTHIA* by the ancients, a doubt arises, whether they may not be the descendants of the Scythian *NOMADES*; if the Scythians on the borders of mount Imaus, did really call themselves by that name; and that it was not a term applied to them by the Greeks alone.* It may also be a question, whether the graziers abovementioned, may not have derived their custom of moving their habitations, from Scythian ancestors: for the custom, as far as I know, does not prevail in any other part of India.

Cutch, is a territory of considerable extent, situated on the south-east of Sindj, the eastern branch of the Indus separating the two countries. It extends along the northern coast of the gulf of Cutch, and is separated from Guzerat, by the Puddar river, or one of its branches. The present capital, and residence of its rajah, is Boodge-boodge; and appears to be the place named Booz, in a MS. map of Guzerat (communicated by my friend Mr. Dal-

* The following passage occurs in M. D'Anville's *Eclaircissements Géographiques sur la Carte de l'Inde*, p. 42. "On ignore le temps auquel les Scythes sont venus occuper le Sindj. Dans le *Péripole de la mer Erythrée*,* la ville de Mimagara, le même que Mansoura, + est qualifiée de capitale de la Scythie. Denys Parigete dit, que les Scythes méridionaux, habitent sur le fleuve Indus. Fustathie les nomme Indo-Scythes: et ce que Prolemer appelle Indo-Scythie, remonte le long de l'Indus jusqu'au fleuve Cossi.†

* The Arabian sea, or sea of Ommus.

+ Bhukor, or Behker, is the same with the ancient Mansura—*Ayin Achbaré*.

† That which runs by Nugh, and falls into the Indus a considerable distance below At-rock: and which, according to my idea, is the river Cossi.

rymple, and, I believe, brought from India by Governor Hornby*), where it is placed about 34 G. miles to the eastward, or E S E of the eastern branch of the Indus. Cutch is composed chiefly of hills, woods, and sandy wilds; and we are utterly ignorant of any particulars, relating to the interior part of it. The mouths of several rivers appear in the map of its coast: and the ancient maps describe the Puddar river, as discharging itself into the gulf of Cutch, through these openings. It is possible that the river formed by the Caggar, and other streams, may discharge itself by one or more of these openings; unless it loses itself in the sands of the desert, which borders on the north of Cutch.

On the south coast of the gulf of Cutch, is a district inhabited by a piratical tribe, named *Sangarians*, who cruise for merchant ships, as far to the west as the entrance of the gulf of Persia. The capital of this state, is Noanagur; Bate (or Bait), and Aramroy, are its principal ports. The Ayin Acbaree takes notice of the founding of Noanagur, by a rajah who was driven out of Cutch, about 280 years ago: and says, that the territory in which it is situated, is named *Little Cutch*. No mention is made of *Sangarians*, in the same book: nor of any piracies being committed by the people of Noanagur.

Nearchus names certain parts of the country between the mouth of the Indus and the river Arabius, *Sangada* and *Saranga*; but

* This map, which has the appearance of greater accuracy in the outline, and certainly contains more matter within it, than any other map of the tract, it is meant to represent; was drawn by a native of Cambay, a Brahmin of uncommon genius and knowledge, named *Saunaru*. This information was given me by Sir Charles Malet, Resident at the Mahatta court of Poona (who first suggested the idea of drawing the map); and who accompanied a very polite letter to me on the occasion, with a copy of the map in question, made by the author. By means of the same communication, as well as by the nature of the presents just made by the EAST-INDIA COMPANY, to MIDKROW, the young Paishwah of the Maharras; I learn that this young prince, has a great turn for geographical studies: whence we may expect a great addition of geographical matter, collected on the spot, by English gentlemen, properly qualified for such pursuits; and *protected* by a patron of science, rather than *tolerated* by the operation of political influence. Under these auspices, Capt. Reynolds, of the Bombay establishment, who has already distinguished himself as an able, and no less enterprising geographer, was tracing some capital lines across the Deccan and Peninsula.

Midkrow, the present Paishwah of the Maharras, is the person mentioned in pages xxvii, and xxviii, of the Introduction.

the tract was too confined, to be the abode of a nation. M. D'Anville supposes that the country of *Sangada*,* was the same with the modern *Sangara*: if so, the Sangarians must first have removed from the western, to the eastern side, of the Indus; and afterwards must also have crossed the gulf of Cutch. The latter fact, indeed, seems verified by the Ayin Acharee.

It is worthy of remark, how exactly the position and description of the haven, named by Nearchus, the *port of Alexander*; and which had an island near it, named *Crocola*; agrees with that of *Crotchey*: and proves uncontestedly, by the circumstance of the proximity of the mountains to the sea coast, when the fleet had advanced only 150 stadia, from the mouth of the Indus; that Nearchus sailed out of the western branch of that river. However, one might conclude, from Arrian's account of Alexander's voyage, down the two branches below Pattala, that he fixed on the easternmost branch, for Nearchus's fleet to proceed through, to the ocean; as Arrian calls it the *left branch*: but the circumstance of Alexander's landing, with a *party of horse*, and proceeding three days along the coast, in the direction that his fleet was to sail; that is, westward; overthrows such a supposition entirely: for no one will suppose that he chose to march a party of horse, three days, along the coast of the delta; where he must have been continually interrupted, by deep rivers and creeks.

Account of the Map of the Countries, lying between the Heads of the INDIAN RIVERS, and the CASPIAN SEA.

THE route of Mr. Forster from Candahar to the Caspian sea, throws considerable light on the geography of the intervening

* Eclaircissements, page 47.

tract: as well as on other geographical materials, that were before involved in some degree of obscurity. As I have said, in another place, the discussion of the geography on the west of Cabul, does not belong so properly to the subject of India, as of Persia: and I shall therefore, at present, content myself with a few general observations, on the small map of the tract, lying between the heads of the Indian rivers, and the southern part of the Caspian sea; for having so often had occasion to mention the countries of Persia and Tartary, contiguous to the north-west parts of India; it will be for the reader's convenience to have a small map of those parts, inserted in this work; by which the relative positions of the frontier provinces of both countries, will be shewn, and the heads of the Indus, Ganges, and Oxus, brought into one point of view. It will also serve to convey an idea of the route pursued by Mr. Forster, from the banks of the Ganges, to the Caspian sea; and which has never been travelled by any European, in modern times: at least no account of it, is to be found on public record.

Between Candahar and Meschid-Sirr, on the south coast of the Caspian sea, Mr. Forster's route lay in a pretty straight line through Herat, Tershish, and Bistam; and this circumstance is favourable to the design of using his scale of computed farsangs, through that space. He estimates this measure roundly at two coases, or about $3\frac{1}{2}$ British miles: but by his whole number of farsangs between Candahar and Meschid-Sirr, his standard of the farsang is calculated too high by about a seventh part: for it will be made to appear, when we take up the subject of the Persian geography, that it will require $2\frac{3}{4}$ of his farsangs to make a degree of a great circle: allowing the inflexions of the roads. With this scale, I have compared several of the intermediate places, in M. D'Anville's map of Asia; many of which I have ventured to alter: for it is probable that M. D'Anville might not have been possessed of an itinerary, so accurate as Mr. Forster's. Between Candahar and Glimnock, Mr. Forster estimates the bearing, at

W, and W by N; and the short distance between the latter, and Herat, N. No reason is assigned for the sudden change of course. From Herat to Bistam, the course was W by N; and the remainder of the way, W; W by N; and NW. These bearings appear to be generally accurate.

This gentleman furnishes us with new ideas respecting the bearing of the chain of mountains, that is commonly supposed to penetrate Asia from west to east, under various names: or rather, he brings us back to the ideas, left us by the ancients. (It is unquestionable, that the Greeks and Romans knew more of the particular geography of Persia, than appears in our modern maps: although the parts that are known to us, may be arranged with more geometrical precision). This chain (anciently named *Taurus*), which rises in lesser Asia, and runs eastward through Armenia; and from thence deviating to the S E, shuts up the south coast of the Caspian sea; was continued by Ptolemy, under the names of *Coranus*, *Sariphi*, and *Paropanisus*: dividing Hyrcania and Tapuri, from Parthia; Margiana from Aria; and Bactria from the province of Paropanisus: or, according to modern geography, dividing Mazanderan, or Taberistan, from Cumis; the countries of Dahistan, Cercan, and Karasm, from Korasan; Balk, and Gaur, from Sistan, or Seistan: and finally was made to join that ridge, which, under the name of *Indian Caucasus*, divided India from Bactria; and afterwards took the names of *Imans* and *Emodus*; separating India from Scythia. It is not known to the moderns what course this chain takes, after it leaves the neighbourhood of the Caspian sea: or whether it does in reality join the Indian Caucasos: but the probability of it is strong, although it is not after the manner M. D'Anville supposed: for he gives it an ESE direction from the Caspian, and makes it pass on the south of Herat. But had this been the case, Mr. Forster must have crossed it in his way from Candahar; instead of which, he crossed no mountains until he came within 100 miles of the Caspian sea; so that he left the

continuation of the Indian Caucasus (if such there be) on his right; or to the northward; and I really believe that the ridge does exist, nearly under the form described by Ptolemy; for the rivers crossed by Mr. Forster, had all a southerly course; proving that the high land lay to the north, although out of sight; therefore the connexion between the Caspian mountains, and the Indian Caucasus (if such exists), must be by the north of Korasan.

There is no necessity for supposing that this chain should be *exceedingly lofty* in every part: the *existence* of it, alone, is contended for. Ptolemy makes a distinction between the height of Caucasus, and that of the continuation of it, eastward, under the name of Imaus; this latter being, by far, the highest: and the point of commencement of the change of name, and elevation (which last is described in words, as well as in the topography, *Asiae*, Tab. VII. and IX.), answers to the western part of Kuttore, and is nearly opposite to the head of the *Suastus* river (*qu. Sewadis*) The ridge of mountains (which he names the *proper* Caucasus) the next in order to the Imaus, westward, occupies the place of Hindoo-Kho, as it is described in page 150: and moreover, confines the country of the *Lambatae* on the south; (*qu. Lumghan?*) and this is succeeded in the same order, by Paropatnissus, which answers to the mountains of Gaur, on the N, and NW of Candahar. As for the ridge that Mr. Forster crossed, near the Caspian sea, it had a north and south direction; and answers to the mountains *Musdaramus* of Ptolemy, which shut up the eastern side of *Parthia proper*, situated on the SE of the Caspian. The modern name of this ridge is *Kana-hoody*; and Mr. Forster remarks, that the elevation of it is far greater on the west, than on the east: so that the lands of Korasan, are, in general, more elevated than those towards Ispahan. The Kana-hoody mountains are those which M. D'Anville has extended to Herat and Cabul; but we find their course to be quite different; but how far they extend to the south, or S E, is still a question.

I confess it was a matter of surprise to me, that there should be no mountains, between the province of Cabul, and Tershish, in the route passed by Mr. Forster: he describes nothing but scattering hills, where the maps usually represent lofty chains of mountains. Throughout his whole route from Candahar to the Caspian sea, he crossed no stream, that was too deep to be forded; although the journey lasted from the beginning of August, to the latter end of January.

I have introduced Alexander's march after Bessus, &c. in order to render the map more complete. We may trace the ancient *Tapuri*, in Taberistan; *Dale*, in Dahistan; *Aracbosia*, in Arok-hage; and *Aria*, in Herat, or Harat. Cau-casus, and Paro-pamissus, the names of ridges of mountains on the N W of India, derive part of their names from *Kho*, and *Pahar*, words which signify mountains, or hills, in the Indian languages. Of Imaus, we have spoken before, in pages 126, and 150.

The most considerable change that has taken place in the geography of the tract comprehended in this small map, since the publication of the first edition,* is that which regards the positions of Cashgar, and the ridge of mountains on the west of it; in respect of India, and Samarcand. On this subject we have already touched, in page 97: and to which I shall beg leave to refer the reader, as an introduction to the remarks, that are to follow.

Samarcand, according to the tables of Ulug Beig, is $99^{\circ} 16'$ east of the Fortunate Islands; and Aleppo, in the same tables, is $72^{\circ} 10'$: that is, Samarcand is $27^{\circ} 6'$ E of Aleppo; and this last, being $37^{\circ} 9'$ E of Greenwich (by the Con. de Temps, $34^{\circ} 49'$ E of Paris), Samarcand should be in $64^{\circ} 15'$ east of Greenwich. If we reckon it from Casbin, which, according to M. Beauchamp's observation, is $49^{\circ} 35'$ E of Greenwich; and by Ulug Beig, $14^{\circ} 16'$ west of Samarcand; the latter, by this calculation, will be in $63^{\circ} 49'$: or

* The map in question, was re-constructed for the second edition.

26 minutes farther west, than if reckoned from Aleppo. But having with much labour, investigated the particulars of the distance, between Casbin and Samarcand; and compared them with the intermediate longitudes and latitudes, recorded in the Oriental tables, I am inclined to adopt $64^{\circ} 15'$, for the longitude of Samarcand. Its latitude, taken with the famous quadrant of Ulug Beig, is $39^{\circ} 37'$ and some odd seconds.

In this position, Samarcand stands $9\frac{1}{2}$ degrees of longitude west of Cashmere, according to my construction; and about 5 degrees of latitude, to the north of it.

Cashgar, in the tables of Abulfeda, is given at $7^{\circ} 30'$ of longitude east of Samarcand, by *Alfaras*; $7^{\circ} 5'$, by *Albiruni*: in those of Ulug Beig, $7^{\circ} 14'$; and $8^{\circ} 10'$ in Naseredilin's. The mean of all, is about $7\frac{1}{2}$ degrees; which would place Cashgar 2 degrees west of Cashmere.

Before we can compare the popular estimation of the distance, between Samarcand and Cashgar, with the difference of longitude between them; it becomes necessary, of course, to ascertain the parallel of Cashgar. This is given in the tables, universally at 44 degrees; which would place it nearly N E from Samarcand. That it bears considerably to the north of east, from Samarcand, is strongly implied by the direction of the roads, which lead to it, from Samarcand, and Bokhara: that from the former being through Cogend, and Andegan (or Ferganah); both of which lie to the north-east of Samarcand; the former at 7, the latter at 11 days journey from it. And from Bokhara, the road to Cashgar, lies through Tashkund, still more to the north than Cogend. Now if the direction of the road be north-east, for 11 days out of 25, the distance of Cashgar from Samarcand; and 14 out of 30, from Bokhara, nearly N E by N, it furnishes a strong presumptive proof that the direction of the whole line, is very far to the north of east. The only line of distance, that will in any degree help us to the latitude of Cashgar, is that given by Bernier (Vol. II. Letter ix.),

in which it is stated that the distance of Cashgar from Cashmere, is 44 journeys, through Little Thibet; but that a shorter road lay through Great Thibet: and these journeys, although not declared to be those of a caravan, may be understood to be such, from the narration. Now caravan journeys, on such a distance as requires 44 days to travel through, cannot *in any country* be taken at more than 14 G. miles of direct distance, each day: and through such countries, as those between Cashmere and Cashgar are described to be (see the latter part of the same letter), perhaps at 11 or 12 only. The distance on this proportion, would reach to the parallel of $42^{\circ} 45'$; on a supposition that $7\frac{1}{2}$, or 8 degrees of longitude, were allowed between Samarcand and Cashgar: but even if 9 or 10 were supposed, the bearing line from Cashmere is so nearly meridional, that 2 degrees of longitude, would make a difference of a few minutes only, in the latitude assigned to Cashgar.

Although no accurate result can be expected from this statement, yet I think it may be inferred, that Cashgar cannot be in a lower parallel than $42\frac{1}{2}'$: and then, admitting either of the distances from Samarcand (between $7\frac{1}{2}$ and 10 degrees of longitude), the bearing would be from E N E, to E N E $\frac{1}{2}$ N. Strahlenberg places it in $42\frac{1}{2}'$ latitude; and at $2\frac{1}{2}'$ of longitude, west of Cashmere: M. Petis de la Croix, in Timur, Book III. chap. vii. in 43° . M. D'Anville went into extremes, and placed it in 40° only.

The Russian maps give no ideas, that can, or rather, should be followed, in the quarter of Samarcand, and western Tartary: forasmuch, as there is an error of 5° of longitude in the position of Samarcand, and the countries adjacent to it, in respect of the Caspian sea: the matter that should have occupied the square of 5 degrees, between the 80th and 85th degrees, being placed in that, between the 85th and 90th. To what extent the error may affect the positions that lie on the north and east, I am ignorant.

Admitting then, that the capital of Cashgar is situated in, or about the parallel of $42\frac{1}{2}'$, we shall find that its distance from Sa-

marcand, and Bokhara, according to the report of the Orientalists, is consistent with the difference of longitude, given in their tables. It is indeed, very probable, that the difference of longitude was calculated to answer the computed distance. And supposing this to be the fact, we have the satisfaction of knowing, that we are in possession of the actual sum of the computed distance, according to the ideas of the natives of the country: because the distance, and the difference of longitude, by their near agreement, verify each other!

Sherefeddin (in his History of Tamerlane, Book V. chap. iv. of the translation by M. Petis de la Croix) states the distance between Samarcand and Cashgar, at 25 journies. As it occurs in the account of the roads between Bucharia and China, these journies must be considered as those of the caravans, which ordinarily passed between the two countries: * and the highest rate at which each journey can be taken, on an extent of 25 days, is 15 G. miles; so that the amount of the distance, will be 375, on a direct line: and this laid off to the parallel of $42\frac{1}{2}$, gives a difference of longitude of about $7\frac{1}{2}^{\circ}$. If the journies should be considered as those which individuals perform, in the course of their own business, 16 $\frac{1}{2}$ may be allowed; and the difference of longitude arising from this calculation, would be about $8\frac{1}{2}^{\circ}$. Another account of the distance is found in Astley's Collection of Voyages and Travels, Vol. IV. p. 637, where it is stated to be 30 days from Bokhara to Cashgar. † In this account, we have some idea of the scale of the days' journies, given us, by the number of journies between Bokhara and Urkenje; which are said to be 15; and the distance (by my series of positions, in Persia, &c.) being about 240 G. miles, leaves 16 for each day, on a journey of 15 days: and if we apply this

* Sherefeddin (in Timur, Book III. chap. vii.) says, that Oluc-Yulduz is two months journey, by the caravan, from Samarcand. Cashgar lay in the way; and D'Anville and Strahlenberg place it at 470, to 480 G. miles from Yulduz; or 32 caravan days, at 15 each. Of course, 28 would remain, for the space between Cashgar and Samarcand. This, although no positive proof, must be allowed to be, at least, a strong presumptive one.

† "By easy journeys, such as merchants take, with their goods;" i. e. by caravan,

proportion to the 30 days between Bokhara and Cashgar (though manifestly too great), we have 480 G. miles for the whole distance, which will give, in effect, the same as the 25 days from Samarcand, $7\frac{1}{2}$ ° difference of longitude. Bokhara is five ordinary journeys to the westward of Samarcand.

There is yet another account of the distance, in Astley; but it differs so much from all the rest, that I shall draw no conclusion from it. In this, Cashgar is stated to be 41 days of easy travelling (caravan I suppose) from Bokhara: and of these, the first 14 are to Tashkund, which (in my map of positions) is about 220 G. miles, N E by N, nearly, from Bokhara; answering to $15\frac{1}{2}$ for each day. But as 27 journeys more, are to be reckoned (by this account) to Cashgar, although Tashkund is supposed to be five journeys nearer to it, than Samarcand is; this calculation on the whole, makes a difference of seven days: and would occasion an increase of almost $9\frac{1}{2}$ ° of longitude, to the $7\frac{1}{2}$ ° arising from Sherefeddin's statement.

I confess, if M. D'Anville had not adopted a position at $19\frac{1}{2}$ * east of Samarcand, for Cashgar; I should have thought it unnecessary to adduce so many authorities; or to have reasoned so much upon them: for nothing appears clearer, or more consistent, to me, than the accounts of the longitude of Cashgar: I mean, in the very general way, in which I intend to apply it. But, for the reader's satisfaction, as well as that the matter itself is curious, as it respects the geography of a country, so little known to Europeans; I shall insert a short passage from an eastern author concerning it.

Capt. Kirkpatrick quotes SHAHNAWAZ, as follows: " Cashgar is bounded on the north, by the mountains of Moghulistan; one extremity of which range, reaches to SHASH, and the other to TERFAN; and from thence to the Calmuck country. On the west, it is bounded by a long ridge of mountains, from which the Moghulistan mountains branch out. To the eastward, lie

"quicksand hills, forests, and deserts." The southern limit is not given.

Here we are told, very plainly, that the *northern* boundary of Cashgar, -is a range of mountains, that extends on one side to Shash; that is TASHKUND, on the river Sihon (or Jaxartes): and that these mountains branch out from another ridge, that forms the western boundary of the same kingdom. Of course, we are left to understand, that the northern frontier of it, is on a parallel, or nearly so, with the territory of Shash: and this is well known to lie on the north of Cogend; and to have its capital, Tashkund, situated in latitude $49\frac{1}{2}$, according to the tables of Abulfeda, Nasreddin, and Ulug Beig. The *long ridge of mountains, on the west*, is of course, that which extends from the N of Cashmere, to a point beyond the heads of the Sihon; separating, in that part, the countries of Cashgar, and Turkestan. In Sherefeddin's Timur, this ridge is named KARANGOUTAC; and is reckoned inaccessible, in a military point of view (Book V. chap. iv). We must once more call the reader's attention to the IMAUS, which separated the two SCYTHIAS; which this ridge of KARANGOUTAC represents. The two countries, or rather tracts, separated by it, and which answer to the southern parts of the two Scythias, are generally named the two BUCHARIAS, by Europeans. Of these, the western tract, or that of Samarcand, is named GREAT BUCHARIA; and the eastern, LITTLE BUCHARIA: and this includes, amongst other divisions, that of Cashgar and Koten. This tract is also the original country of the Moguls; or MOGULISTAN; and hence this term is applied by Shah-nawaz, to the mountains that form its northern boundary.*

No doubt ought to remain, concerning the proximity of Cashgar to Great Bucharia; when we have proved, from the writings

* I apprehend that the term Bucharia, or Bokhara, is derived in the first instance, from the city of Bokhara, near the Jhou (Oasis), which was the emporium of the commerce, carried on by Europeans, in that quarter: and that it was afterwards extended to the adjoining country, beyond it. There are many examples of this kind: in particular, see page xxi of the Introduction, and the note.

of Abul Fazil, and Abdul Humeed, that the south-west extreme of Cashgar, joins to the N E quarter of Cabul: or admitting that part to be no more than a nominal dependency of Câshgar, the real territory itself is not likely to be very remote.

It seems to me that the capital of Cashgar, as well as the mountains on the north of it, which, in D'Anville's map of Asia, extend towards Acsou and Terfan; ought to be removed several degrees to the north-west, and to the neighbourhood of Al Shâsh: these being the mountains of Mogulistan, described by Shahnawaz. This will make a prodigious change in this part of our maps of Asia. Far more consonant to the ideas of Shahnawaz, is this part of Strahlenberg's map of the Russian empire; which includes also the western Tartary, and the courses of the rivers Jihon and Sihon (*Oxus* and *Jaxartes*). His mount *Musart*, which passes along the north of Cashgar, and Mogulistan in general, at the height of 43° and 44° of latitude, answers to the Mogulistan mountains of Shahnawaz; and does really join to Shâsh, on the west: having also the long ridge branching out, and forming the western boundary of Cashgar.

Strahlenberg's map is certainly a composition of great merit, for the time in which it appeared (1730); and proves that he had taken a great deal of pains to collect materials, for the tract lying between the Russian borders, and those of India and Persia. Through the want of observations of longitude, his distances are often very faulty; but I am of opinion that his ideas were too much slighted, by some geographers, who came after him; and who have given the preference to matter of much less value, than that which he has exhibited.

Considering this part of Strahlenberg's map, in a very general way, the following are the observations that I have made on it.

1st. Petersburgh, the Caspian sea, and Samarcand, stand nearly in their proper positions, in respect of each other.

2d. Cabul, Cashmere, and Cashgar, although nearly right, in

respect of each other; are from 4 to 5 degrees too far east, in respect of the Caspian sea, and Samarcand.

3d. The head of the Irtish river is by several degrees too near to Cashgar; even as the latter stands in the map.

Hence it follows, that the space between the Irtish and Cashgar is, out of all proportion, contracted; whilst Great Bucharia is too much extended. Few parts of the continent of Asia, appear to have their geography so imperfectly described, as that between the Russian frontier, and Bucharia. I think, too, that our maps are in a great error, with respect to the positions of the countries lying between Bucharia and China: all of which, in my idea, have been made to recede too much from Bucharia, towards China. It is to the Russians that we are to look up, for better information.

In the discussion of the position of Cashgar, I laid out of the question, entirely, the Chinese and Tartarian geography in Du Halde. At the same time, I would not be understood to impeach the truth of the Chinese geography of Tartary, in general; because there is an error in a particular part of it. It must stand or fall hereafter, according to its own merits. But the great error respecting the latitude of the upper part of the Ganges, in the same geography, ought to make us receive with caution the remaining particulars of it.

Having noticed an error or two of M. D'Anville's, which fell in my way, I feel it a duty even to go out of my way, in order to add my opinion to his, on the subject of *Serica*; and the limits of the world, as known to the ancients.* I cannot hesitate a moment, after examining the evidence, to determine with him, that the *Sera Metropolis* of Ptolemy, was situated at the NW extremity of the present empire of China: and very near to the parallel assigned it by that geographer. Of course, the knowledge of Ptolemy ended at this point, eastward. The rivers of Serica, al-

* See the Supplement to D'Anville's *Antiq. Geog. de l'Inde*.

though described to run to the parallel of 55° , and upwards; a parallel far beyond the heads of the Siberian rivers, yet are evidently meant, by the context, for the rivers of Egyur (Yugure), and Tangut. I differ in one particular from M. D'Anville; which is, that the *CECHARDÉ*, not the *IRHAGURI*, represent the *YUGURES*: I think the position clearly points it out. As for the error in Ptolemy's latitude, as well as his longitude, it must be placed to the account of badness of materials. Had Ptolemy lived in the present times, he might have expressed his wonder, that, considering the advantages we possess, our maps of this part should be so incorrect; when the tables of Abulfeda, Nasereddin, and Ulug Beig, and the History of Timur, by Sherefeddin, have been so long amongst us, in an European language.*

After so many digressions, for which I solicit the reader's indulgence, I shall close the account of the small map, with an observation or two, respecting some geographical misconceptions which I have observed to prevail. The first is, that the modern Bucharia (or Bokhara), is the same with the ancient Bactria. This is so far from being the case, that Bucharia is situated beyond the river anciently called the *Oxus*, or the modern Jihon: and is the country anciently named *Sogdiana*; from *Sogd*, the valley: that is, the beautiful valley, in which Samarcand (anciently *Maracanda*) is situated. Bactria, or Baetriana, on the contrary, lay on the south of the Oxus; and comprehended the present provinces of Balk and Gaur; and probably part of Korasan. *Mawer-ul-nere*, is also applied to the country beyond the Jihon; and between the lower parts of the courses of that river, and the Sihon, or ancient

* The tables were translated about the middle of the last century, by Dr. John Graves, of Oxford; and the History of Timur, by M. Petis de la Croix (the younger; not the compiler of the Life of Gengiz Cawn); early in the present century. The many references that I have made to the works, thus brought to our knowledge, by the well applied learning of these gentlemen; furnish the best eulogy in my power to bestow, both on the works themselves, and on the translators of them.

It is to be regretted, that Abulfeda's Persian geography, was not one of the subjects made choice of, by the learned gentlemen, who have favoured the world with translations of certain MSS. in the library of the King of France.

Jaxartes: Mawer-ul-nere signifying *the country beyond the river*; or *Transoxiana*.

The other misconception respects ancient *Parthia*. Very inaccurate ideas prevail, concerning the local situation of that country. Those, whose knowledge of it, is collected chiefly from its wars with the Romans, conceive Parthia to be only the country bordering on the Euphrates and Tigris; as the Parthian boundary, on the extension of their empire westward, met that of the Romans. Strabo has either been mistaken in this point, or has not fully expressed himself, where he describes the Parthians who defeated Crassus, as the descendants of those Carduchians, who gave so much trouble to Xenophon, during the celebrated retreat of the Greeks. It is probable, or at least possible, that the Parthians might have had in their army at that time, some detachments from among those hardy mountaineers; as the Carduchi were then numbered among their subjects: but the bulk of the Parthian army, came from Persia, their proper country. Whoever considers the slight subjection in which the Carduchians were held, even during the vigorous reigns of the first Persian emperors, will not expect that the Parthians had many recruits from that quarter. The history of the Parthian geography is briefly this; Parthia proper, was a small province, very near to the south-east extreme of the Caspian sea; which territory, after the division of Alexander's empire, fell to the share of the Seleucidae, kings of Syria, and of the east; about 300 years before our era. About 50 years after, Parthia rebelled; and together with Hyrcania, and other adjoining provinces, became an independent state, under Arsaces. As the empire of the Seleucidae grew weaker, the Parthians extended their country westward; and the fine province of Media (now Irak-Ajami) fell to them: and within a century after the foundation of their state, it had swallowed up all the countries from the Indus to the Euphrates, Bactria included: and this province had thrown off the yoke of the Seleucidae, long before Parthia. The Parthian conquests

in Armenia, about 70 years before Christ, brought them acquainted with the Romans; whose conquests met theirs, both in that country and in Syria. The Parthians, together with their conquests, had advanced their capital westwards: and had established it on the Tigris at Seleucia, or rather Ctesiphon (near the present Bagdad) before their wars with the Romans commenced. The particulars of their first wars with the Roman people, which continued about 65 years, are too well known to be repeated here, had this been a proper place for them; such as the expeditions of Pompey and Anthony; and the defeat of Crassus. On occasion of this last event, the Parthians extended their conquests further westward, but were afterwards compelled to retire: and they generally lost ground in Armenia and Mesopotamia, during the time of the Roman emperors. Trajan penetrated to their capital; and satisfied his curiosity by embarking on the Indian sea. The moderation of Adrian restored the ancient boundary of the Euphrates. In A. D. 245, Persis, or Persia proper, which had for some ages ranked as a province of Parthia, gained the ascendancy; and, under Artaxerxes, put an end to the dynasty of the Arsacidae, and restored the ancient name of Persia to the empire; after that of Parthia had existed about 480 years. So that, in fact, the Parthian empire, considered generally, was the Persian, under another name.

* It should have been mentioned, in page 166, that the author of the *Heft Akleem*, a geographical work that was compiled during the reign of Acbar, states the following fact: "The sovereignty of Badakshan, continued in a family, which derived its descent from Alexander the Great; until Abu Said Khan Goorgan conquered the country, and put an end to the dynasty of Macedonian princes, in the person of Sultan Mohamed, the last monarch of that race." The date is not given. (Kirkp. MSS.)

SECTION IV.

The Tract situated between the KISTNAH River, and the Countries traversed by the Courses of the GANGES and INDUS, and their principal Branches: that is to say, the middle Parts of INDIA.

THIS very extensive tract is bounded on the north-east by the soubahs of Bengal, Bahar, Allahabad, and Agra; on the NW by the course of the river Puddar; on the east and west by the sea; and on the south by the river Kistnah, or Krishnah: and comprehends in general the soubahs of Guzerat, Malwa, Berar, Orissa, Candeish, Amednagur (or Dowlatabad), Visiapour (or Bejapour), and Golconda. It is about 800 British miles in length, from NW to SE; and 600 wide: and has in and about it, many points that are determined either by celestial observations; or inferred from such points, by the help of surveys, or good charts.

The fundamental points on which the construction and scale of this part depend, are as follow:

On the north and north-east, Agra, as determined by observations and survey (page 48); and Calpy, Chatterpour, Rewah, Burwah, and Balasore, inferred from measured lines drawn from other places of observation. On the east, Cattack, as determined by Col. Pearse (page 11). On the south, Masulipatam, as determined by Col. Pearse, and Capt. Ritchie (page 12). On the west, Bombay, by the observations of the Hon. Mr. Howe (page 31), and

Surat, Cambay, and Diu Point, inferred from charts and surveys (page 33). And in the interior parts, Narwah, Siron, Bopaul, Hussiaabad, Burhanpour, Poonah, Amedabad, by Mr. Smith's observations, and General Goddard's march: Nagpour, Ruttun-pour, and Gurrah, by Mr. Ewart's observations and surveys; and Arungabad, Hydrabad, Sumbulpour, Agimere, and Areg (near Visiapolis), by miscellaneous materials. I shall proceed first, to give the authorities by which these *primary stations* or points, were determined; and afterwards shew how the intermediate parts were filled up, in detail. The construction of the sea coasts, on both sides of this tract, has been already discussed, in Section I.: and I shall begin my account of the construction of the inland parts, with Mr. Smith's and General Goddard's lines across the continent, from Calpy to Bombay, and Surat.

The Rev. Mr. Smith set out from Calpy with Col. Upton, in 1776, on an embassy to the Mahratta court, at Poonah; and fell into the great road from Delhi and Agra, to the Deccan, at the city of Narwah; which is situated on the river Sindeh, near the entrance of a famous pass, that leads through the chain of mountains that divide Malwa from Agra. From Narwah, he proceeded to Siron, a city of Malwa, subject to Madajee Sindia: and from thence to Burhanpour, the capital of Candesh: and at one period, of the Deccan also. It is yet a flourishing city; and is situated in the midst of a delightful country. In his way to this place from Siron, he crossed the famous river Nerbuddah; formerly the reputed boundary of the Deccan, to the north. From Burhanpour, he went to Poonah, the capital of the western Mahratta empire, crossing the heads of the Godavery and Beemah rivers in his way: and from Poonah to Bombay. During all this route, he took observations of latitude and longitude, as often as opportunity offered; which was not unfrequently: and with these, together with the intermediate bearings of the road, he constructed a map, which is no less valuable on the score of its general accuracy, and extensive

information; than curious, by the novelty of its subject. We had then for the first time, a geographical line, on which we could depend, drawn across the continent of India, through the principal points between Agra and Poonah; and which, by establishing so many interesting positions, has enabled us to correct several routes, which, without it would have remained very indeterminate. Narwah, for instance, corrects the bearing and distance of the road between it, and Agra; Siron, the road to Ougein, and Mundu; and Burhanpour, the position of Arungabad; and the bearing of the roads to Surat, Hydrabad, and Nagpour.

General Goddard's celebrated march from Calpy to Surat, touches on the route of Mr. Smith, at Calpy, Siron, Bopaul, Huridah, and Burhanpour: and the map of it, which remained in the general's possession at the time of his death, was said to be drawn from the materials furnished by the field engineers; who measured the distances, and took the bearings of the road, the whole way. On a comparison of the difference of longitude shewn by this map, with that resulting from Mr. Smith's observations, the difference was $6' 35''$; the measured line giving so much more than the observations.

General Goddard's map gave the miles of westing.

between Calpy and Strong 109 $\frac{1}{2}$, or difference
of longitude - - - - - - - - - $2^{\circ} \text{ } 0' \text{ } 15''$

And from Sirong to Burhanpour 96½ miles of west-

ing, or difference of longitude - - - - 1 44 20

Whole difference between Calpy and Burhanpour

$$\begin{array}{r} 1 \quad 44 \quad 20 \\ \hline 3 \quad 44 \quad 35 \end{array}$$

And, Mr. Smith's longitude of Calpy is - $80^{\circ} 0' 0''$

Burhanpour - 76 22 0

Difference of longitude by observation 3 38

And in the interval between Calpy and Sironq (about 2 degrees), the measurement exceeded the difference of longitude by observation 4 minutes; so that the measured line exceeded the distance by observation, proportionally through each interval.

Now it remains to be observed, that Calpy, on the south bank of the Jumnah river, the last point in the survey, that way, and the first in Mr. Smith's route; stands in my map, in lat. $26^{\circ} 7' 15''$, and in lon. $80^{\circ} 4'$; while Mr. Smith reckons it in 80° . Again, on the west side of India, I have taken Bombay at $72^{\circ} 40'$ (see page 31); and Mr. Smith places it in $72^{\circ} 45'$; so that, in fact, he is $4'$ to the west of my account at Calpy; and $5'$ to the east of it at Bombay; his whole difference of longitude between Calpy and Bombay, being $9'$ less than what I have taken it at. And again, it has been observed that Mr. Smith reckons $6' 35''$ less between Calpy and Burhanpour, than Goddard's measured route gives. It is certain that observations of longitude, taken in the ordinary way, cannot be expected to correct small errors in distance, so well as measured lines; and therefore it is no impeachment of the general utility of Mr. Smith's observations, that I have ventured to deviate from them, in fixing the positions of some places in the road across the continent.

Narwah, or Narwha, is the first point that I shall notice in Mr. Smith's map, from Calpy. He places this city and fortress in lat. $25^{\circ} 40'$; lon. $78^{\circ} 17'$; his difference of longitude from Calpy, being $1^{\circ} 43'$. Mr. Cameron, who surveyed the roads and country between Etayah and Sironq, reckons $1^{\circ} 3'$ difference of latitude; and 57 miles of westing, or $1^{\circ} 4'$ difference of longitude, from Etayah to Narwah. Now, Etayah being by the survey in $26^{\circ} 43' 40''$ lat.; and $79^{\circ} 17'$ lon.; the latitude of Sironq comes out perfectly right, but the longitude is $4'$ to the west of Mr. Smith's account; or $78^{\circ} 13'$. I cannot, however, determine with what degree of exactness, this survey was made; and I have placed Narwah in $79^{\circ} 17'$.

Sirong (called also Seronge) is by Mr. Smith's observations, in lon. $78^{\circ} 4'$; and as General Goddard's map makes it 2° of longitude west from Calpy (which is in $80^{\circ} 4'$ by the above account), they both agree in this point, although they differ in the quantity of westing between the two meridians of Calpy and Sirong: for Mr. Smith's difference of longitude is only $1^{\circ} 56'$; and the measured line exceeds it by 4 minutes. The latitude of Sirong is $24^{\circ} 4' 40''$. It is proper to observe, that General Goddard's route crossed Mr. Smith's about 6 miles to the S E of the latter place; but the survey was *closed* to it.

Between Calpy and Sirong, General Goddard's route passed through Chatterpour, a city in the western quarter of Bundelcund (or Bundela). This place was formerly visited, and its position determined by mensuration, from Rewah; by Capt. Carter. He placed it in lat. $24^{\circ} 58' 30''$; lon. $79^{\circ} 56' 30''$. General Goddard's route represents it as being half a minute in latitude more to the north, that is in $24^{\circ} 59'$; and $3' 30''$ more westerly in respect of Calpy. As it was fixed by a measured line drawn westward from Rewah, its longitude ought to be better determined by it, than by a meridional line drawn from Calpy; and accordingly, I have not altered its position.

Bopaltol is the next place where the roads meet; Mr. Smith's longitude of it is $77^{\circ} 48'$, and lat. $23^{\circ} 19' 30''$. General Goddard's map gives 32 G. miles, or $35' 15''$ of longitude, from Sirong; making Bopal in $77^{\circ} 28' 45''$. I have placed it in $77^{\circ} 28'$ lon.; and $23^{\circ} 14'$ latitude. It appears unaccountable that there should be no less than $19'$ difference, between Goddard's account and Mr. Smith's, in the longitude of Bopal. I copied the longitude, as it stands above, from Mr. Smith's map.

Hurdah, on the south of the Nerbuddah river, is the next point of junction of the two routes. This, Mr. Smith places in $77^{\circ} 21' 15''$; and by Goddard's line, it comes out $1' 30''$ more to the west; or $77^{\circ} 19' 45''$. It will be recollectcd, that as General Goddard

at setting out, was $4'$ to the eastward of Mr. Smith's account (at Calpy), Hurdah will be $5' 30''$ on the whole, more to the westward, than Mr. Smith's difference of longitude from Calpy, would give.

Between Bopal and Hurdah, General Goddard's route makes a large elbow, or angle, to the south-east, to Hufsingabad Gaut, on the south bank of the Nerbuddah river; and on the frontiers of Nagpour, the eastern division of the Mahratta empire: thus establishing a most useful primary point or station, in a quarter where it was the most wanted. Hufsingabad is placed in lat. $22^{\circ} 42' 30''$; lon. $77^{\circ} 54'$; and about 140 G. miles to the N W of Nagpour city.

The two routes run often into, and across each other, between Hurdah and Burhanpour. The latter, as is said before, is by Mr. Smith's observation, in lon. $76^{\circ} 22'$; and in lat. $21^{\circ} 19'$; and by Goddard's measurement, which gives $3^{\circ} 44' 35''$ from Calpy, in lon. $76^{\circ} 19' 25''$; which, rejecting the seconds, is the longitude I have adopted for it; not altogether on the evidence of the measured distances themselves, but because they agree with the whole difference of longitude arising from the observations adopted in the map, between Calpy and Bombay (see page 204).

Burhanpour is a very fine city, and was one of the earliest conquests made in the Deccan. In Acbar's division of the empire, it ranks as the capital city of the soubah of Candeish. It is now in the hands of the Poonah, or western Mahrattas. About 20 miles to the N E of it, is a very strong fortress named Aseer, or Aseergur.

The final separation of the two routes, is at Burhanpour, from whence Goddard went westward to Surat; and Smith, south-westward, to Poonah. The measure of the road to Surat gives $3^{\circ} 30' 45''$ difference of longitude; which taken from $76^{\circ} 19'$, leaves $72^{\circ} 48' 15''$ for the longitude of Surat; which I have adopted. This subject has been already discussed, in the first Section (page 32), where it is observed, that the different authorities between

Bombay and Surat, gave 10' difference of longitude between them; by which (as Bombay is taken at $72^{\circ} 40'$) Surat would be in - - - - - $72^{\circ} 50' 00''$

If Mr. Smith's observation at Burhanpour was

adopted $76^{\circ} 22'$, then it would be in - - - - - $72^{\circ} 51' 15''$

If this longitude of Bombay, $72^{\circ} 45'$, then - - - - - $72^{\circ} 55' 00''$

If Mr. Howe's - - - - - $72^{\circ} 40'$, with an allowance of $8' 15''$ instead of 10' difference of lon. - - - - - $72^{\circ} 48' 15''$

The last point in Mr. Smith's route, is Poonah, and the longitude given for that, is 74° ; or $1^{\circ} 15'$ east of Bombay. But as I have taken Bombay at $72^{\circ} 40'$, Poonah, to preserve its proportional distance, should be in $73^{\circ} 55'$; which I have accordingly placed it in; so that it stands in respect of Burhanpour, only 2 minutes farther to the westward, than Mr. Smith places it. Its latitude is $18^{\circ} 30'$. Between Burhanpour and Poonah, Mr. Smith's map establishes some useful points, from which other routes may be laid off; such as Nusserabad, Chandor, Unkei-Tenki, Bahbelgong, and Nimderrah Gaut.

Poonah is the capital of the western Mahratta empire; and is situated about 90 miles on the east of the Gauts: 100 road miles from Bombay; and about 75 from the nearest sea coast. It is meanly built, and not large; and lies quite open and defenceless. Poo-roonder, a fortress on a mountain, about 18 miles to the E S E of Poonah, is the place of refuge in case of invasion: there the archives of government are deposited; and there I believe the principal officers usually reside. Whenever an invasion has happened, the Mahrattas never thought Poonah, a place worthy of defence: and have accordingly destroyed it with their own hands. In a state that can conveniently exist without a great capital, no doubt but that great advantages are gained, in war, by a release from such an incumbrance. An overgrown capital, full of rich inhabitants, and a kind of general depository of wealth, however pleasant it may be, as it respects polished society, and the elegancies of life; yet

from the greatness of its extent, and other circumstances, incapable of defence; must be considered as a great political evil in a state: it is like a fortress that exposes its weakest part to the enemy, and points his attacks: and, to pursue the allegory, there may be some danger of the garrison's sacrificing the interest of the empire at large, in order to preserve their own property, in the hour of assault. The Scythians, who were not chained to the soil, could never be conquered: and those who have no large capitals, stand in the next degree of security; all other circumstances taken into the case. If the question be considered, as it concerns morals, the objections are yet stronger: for the larger the capital, the greater will be the proportion of the population that is corrupted.

Amedabad, the capital of Guzerat, was the extreme point of General Goddard's marches to the northward, in the province of Guzerat. In the first Section, a comparison was made between the scale and bearing of the map of General Goddard's marches in Guzerat, and those of the surveys taken between Surat and the Myhic river; and it was found to agree so well, that the line between Brodera and Amedabad might be very safely adopted. The bearing was N. 36° W., and the distance 53.2 G. miles; giving for the position of Amedabad, $22^{\circ} 38' 30''$ lat.; and $72^{\circ} 37'$ lon.; or $3'$ west of Bombay. By M. Thevenot's account, the latitude is 23° and some odd minutes: and 23° by the Ayin Acbaree.

Amedabad is a very considerable city, and succeeded Mahmoodabad, as capital of Guzerat. It is one of the best fortified cities of Hindoostan; and made a good defence when taken by General Goddard in 1780. On the peace of 1783, it was restored to its former possessors, the Poonah Mahrattas. Travellers have dwelt much on the beauty, and convenient situation of this city, which is in a level country, and on the banks of a small navigable river, named Sabermatty; and which, together with other confluent streams, falls into the head of the gulf of Cambay, near to the city of that name. Cambay, is indeed, the port of Amedabad, and is

distant from it about 56 road miles. It is a large city, and appears to be the *Camanes* of Ptolemy; although the gulf, which is now denominated from Cambay, had then its name from *Barygaza*, or the modern Baroach.

Aurungabad is a point of considerable importance to the construction of the western part of the tract in question; and although we have neither its latitude, longitude, nor distance *accurately measured*, from any one point; yet the sort of coincidence that arises between a number of estimated routes, from six different places, in opposite directions, round it; impresses a certain conviction of its being placed nearly in its true position. It will be necessary to particularize the principal of these routes. One of them regulates also the positions of Hyderabad, Beder, and Mahur; and is that of M. Bussy from Masulipatam. The copy from whence I collected my ideas on the subject, is that included in the late Mr. Montresor's map of the southern part of India. As his map goes no farther west than Aurungabad, we may conclude that he has not altered the original bearing and distance, with a view to reconcile its situation to any other place to the north or west.

Masulipatam is already placed in the map, in lat. $16^{\circ} 8' 30''$; lon. $81^{\circ} 12'$, on the authorities of Col. Pearse and Capt. Ritchie (see page 12). This is a city and port of trade, near the mouth of the Kistna river; and appears to be situated within the district named *Mesolia*, by Ptolemy. Between this place and Bezoara (or Buzwara) a fort on the north side of the Kistna river, M. Bussy's route allows only 36 G. miles; but as there is existing, a map of Major Stevens's, which fixes the said distance at 40,3 G. miles, I have adopted it; and allowed M. Bussy's authorities to commence only at that point. Bezoara, so placed, is in lat. $16^{\circ} 33'$; and lon. $80^{\circ} 39'$. Then from Bezoara, to Aurungabad, the bearing is given at W $35^{\circ} 10' N$, 323 G. miles; producing $5^{\circ} 6'$ difference of latitude; and ± 64 of westing; or difference of longitude (in lat. 18°) $\pm 38'$. This would place Aurungabad in lat. $19^{\circ} 39'$, lon. $76^{\circ} 1'$.

Bussy's (or rather Montresor's) whole distance from Masulipatam to Aurungabad, was 359.

Let us now examine what *data* we have to check this long line of M. Bussy's, from the side of Surat, Poonah, and Burhanpour. The position of Surat has been just accounted for: and Noopour, a city on the road from Surat to Burhanpour, is by Goddard's route 59' of longitude to the east of Surat; or in lon. $73^{\circ} 47' 15''$. And from this place to Aurungabad, Tavernier reckons 105 coses; which, at 42 to a degree, give 150 G. miles of horizontal distance. Now, Noopour, Aurungabad, and Bezoara, lie as nearly as possible in a right line, whose extreme length is 475 G. miles. Tavernier's 150, added to Bussy's 323, make up 473; or the whole space, within two miles. But from the nature of a march of an army in a warm climate, great part of which is often made in the night, it must necessarily require correction; in the bearing at least, and probably in the distance too. Nor can the 105 coses of Tavernier, be expected to be even so correct as the march: it is therefore a matter of surprise that only so small a difference should have arisen. It should be remembered that 43 miles were added to M. Bussy's original distance, between Masulipatam and Bezoara; so that the whole original error was 6;3; if we do not refer a share of it to Tavernier's estimated distance. It is proved in another instance by Major Gardner, in Peach's march from Ellore towards Warangole, that M. Bussy's geographer has given too little distance. This is probably an error of the compiler, not of the surveyor; it being an error of a different kind from what might have been expected, in the ordinary way of measuring distances with a perambulator.*

The latitude of Aurungabad is inferred from its distance from Burhanpour given by Golam Mohamed† at 66 coses; and as the

* That long distances may be accurately measured by a perambulator, I need only mention, that during the Bengal survey, I measured a meridian line of three degrees, with a perambulator; and found it to agree minutely with the observations of latitude. However, due allowance was made for the irregularities of the ground, whenever they occurred. The country, indeed, was in general, flat the whole way.

† A confidential person, sent by Col. Camat, in 1774, to explore the roads and country of the Deccan, and to gain intelligence concerning the Mahratta powers.

bearing is not far from meridional, we may state the difference of latitude at $1^{\circ} 34'$; which taken from $21^{\circ} 19'$, the latitude of Burhanpour, leaves $19^{\circ} 45'$, for that of Aurungabad.* Now, M. Bussy's line, gives only $19^{\circ} 39'$; which is $6'$ too far southwardly, by this account. If $19^{\circ} 45'$ be adopted, some further addition must be made to the line of distance from Bezoara; but it is too trifling a matter to require discussion. In effect, the longitude of Aurungabad by these *data*, will be $76^{\circ} 2' 30''$; lat. $19^{\circ} 45'$.

Two more lines of distance are given from Niinderrah Gaut and Bahbelgong; two points in Mr. Smith's route, on the west and S W of Aurungabad. Niinderrah is in lat. $19^{\circ} 12' 45''$, lon. $74^{\circ} 54' 30''$; and Bahbelgong in lat. $20^{\circ} 45'$, lon. $74^{\circ} 51' 30''$. M. Anquetil du Perron furnishes these distances. That from Niinderrah to Aurungabad, he reckons $5\frac{1}{2}$ coases; and that from Bahbelgong $34\frac{1}{2}$. Now, as the distance between Poonah and Niinderrah, is known, it furnishes a scale for the rest of his route. He makes this distance $34\frac{1}{2}$ coases; but it is clear that he reckoned by some other standard than the common coas (possibly he reckons leagues and coases the same, as we shall have occasion to remark in his route from Goa to Poonah) for the distance being 69.7 G. miles of horizontal distance between Poonah and Niinderrah, it should rather be $48\frac{1}{2}$ coases, than $34\frac{1}{2}$. However, taking his distance for a scale, whatever the denomination may be, the distance between Niinderrah and Aurungabad, will be 64.7 C. miles; and that from Bahbelgong, 70.2 . And the mean of these accounts give also, $76^{\circ} 2' 30''$ for the longitude of Aurungabad.

There is yet another line of distance to Aurungabad, and that is from Nagpour; whose position is ascertained with precision. Two accounts of the estimated distance between them, collected by Lieut. Ewart, are, 162, and 165 coases: the mean of which, $163\frac{1}{2}$, at 42 coases to a degree, is 233 G. miles of horizontal distance. This

* M. D'Anville reckons the same difference of latitude between the two places, but he has placed both of them too far north by 24 minutes; following I apprehend, the latitude of Burhanpour, given in the Ayin Akbari.

would place Aurungabad, admitting its latitude to be $19^{\circ} 45'$, in $75^{\circ} 53' 30''$ or $9'$ to the west of the other accounts. The result of the short distances, are doubtless to be preferred to that of the long ones; and I insert this last only to shew the extremes of the different accounts.

Lastly, if the distance from the four nearest points are taken; that is, from Noopour 150 G. miles; Burhanpour 95; Nimderah 64.7; and Bahbelgong 70.2: the mean point between the intersections of these, will be in lat. $19^{\circ} 44'$, lon. 76° .

Although I have taken the latitude of Aurungabad at $19^{\circ} 45'$, as its distance from Burhanpour is so nearly meridional; yet the intersections of the other distances, point to its being in a lower latitude, by 4 or 5 minutes: in which case, its position would also be somewhat more westerly.

Upon the whole, I have placed Aurungabad in lat. $19^{\circ} 45'$, lon. $76^{\circ} 2' 30''$; and by what has been said, it cannot be much out of its true place; but as it is a point of great importance in the geography of this part of India, it required particular discussion; being the centre of several roads; and the bearing of that long line, between it and Hydrabad, Beder, Calberga, &c. depending on it.

Aurungabad is but a modern city; owing its rise from a small town, to the capital of the province of Dowlatabad, to Aurungzebe; from whom also, it had its name. When the Deccan became a province of the Mogul empire, it became the provincial capital; and continued to be so, after the Nizams became independent of Delhi; and until the encroachments of the Poonah Maharratas, of late years, made it an uncomfortable residence to the Nizam. When the Deccan was first invaded by the Patan emperors of Delhi, Deogire was the capital of the province of Dowlatabad, and was situated near the fortress of the same name; which is built on a mountain about 4 or 5 coses to the NW of Aurungabad; and is deemed impregnable by the people of the country.

The Emperor Mahomed, in the 14th century, made an attempt to establish the capital of his empire at Deogire; and to that end almost ruined Delhi, in order to drive the inhabitants to his new capital, about 750 miles from their ancient habitations. This scheme, however, did not succeed: and was, if possible, the more absurd, as at that time but a small progress had been made in the conquest of the Deccan.

The pagodas of Elora are in the neighbourhood of Dowlatabad, and are mostly cut out of the natural rock. M. Thevenot, who particularly describes them, says, that for two leagues together, nothing is to be seen but pagodas, in which there are some thousands of figures. He does not, however, greatly commend the sculpture of them: and, I apprehend, they are of early Hindoo origin. We must remember that Deogire, which stood in this neighbourhood, was the greatest and richest principality in the Deccan; and that the fame of its riches, incited Alla to attack it, in 1293: and these elaborate monuments of superstition, were probably the offspring of that abundant wealth, under a government purely Hindoo.

M. Bussy's line includes within it, the positions of Hydrabad, Golconda and Beder. When the line is corrected as above, to Aurungabad, Hydrabad will be found in lat. $17^{\circ} 24'$; which I conceive to be too far to the northward, considering its reputed distance from Nagpour and Cuddapah. M. D'Anville too (in his Eclaircissements) says that the latitude of Hydrabad is $17^{\circ} 12'$. How he came by his information, I know not; but I believe it to be nearly right: and this is the parallel it is generally placed in. A third circumstance tending to confirm this opinion, is, that the map of Col. Peach's march from Ellore to Warangole (in 1767), in which the distances were measured, and the angles of position taken by Major Gardner, places the latter only 37 G. miles from the position in which Hydrabad stands by M. Bussy's line. It can hardly be deemed an impeachment of the general truth of a line

of 360 G. miles, measured after an army, that a position, in or near that line, should be ten or twelve miles out of the supposed line of direction. It is conformable to my idea of the distances of Nagpour, Cuddapah, and Warangole, that Hydrabad should be in $17^{\circ} 12'$, rather than in $17^{\circ} 24'$; and I have accordingly followed M. D'Anville: giving the lines between it and Aurungabad on the one side, and Condapilly on the other, a new direction accordingly.

Although by proportioning M. Bussy's march from Bezoara, Hydrabad is placed in $78^{\circ} 51'$ longitude; or only 114 G. miles from Bezoara, yet the different reports of the distance between these places, is much greater than the construction allows. For 114 miles will produce only $87\frac{1}{2}$ cofses, according to the proportion of 46 to a degree (which is the result of the calculation made on the road between Aurungabad and Masupalitam, page 5); whereas, one account from General Joseph Smith, states the number of cofses at 98; and another from a native, at 105. Again, Col. Upton reckoned $118\frac{1}{2}$ cofses between Hydrabad and Ellore, which the construction allows to be only 138 G. miles; or $105\frac{1}{2}$ cofses, according to the same proportion of 46 to a degree. So that I have either mistaken the longitude of Hydrabad, which is improbable, all circumstances considered; or the cofs is even smaller than I have supposed. Or the road leading through a hilly and woody country, is more crooked than ordinary,* and the journals remark its being very woody, and thinly inhabited, between Condapilly and Hydrabad. Until we have the latitude and longitude of Hydrabad, or some place very near it, we cannot be satisfied with its present position; for M. Bussy's line is too long, to be exact, without the aids of latitude to check it. The reputed distance between it and Nagpour, 169 cofses, agrees perfectly with its corrected parallel of $17^{\circ} 12'$.

* General Smith's proportion of cofses to a degree, is $31\frac{1}{2}$; Col. Upton's $52\frac{1}{2}$; and the map by the native 55.

Hydrabad, or Bagnagur, is the present capital of the Nizams of the Deccan; who since the dismemberment of their empire, have left Aurungabad, the ancient capital; which is not only in a corner of their dominions, but in that corner which lies near their hereditary enemy, the Poonah Mahrattas; and which is also the least defensible. About 5 or 6 miles to the WNW of Hydrabad, and joined to it by a wall of communication, is the celebrated fortress of Golconda,* occupying the summit of a hill of a conical form, and deemed impregnable. When Aurungzebe conquered the kingdom of Golconda, in 1687, this fortress was taken possession of by treachery.

The next *primary point* or *station*, and one of the most important, as being the farthest removed from any other given point, in the whole construction, is Nagpour; the capital of the eastern division of the Mahratta empire, and nearly in the centre of India. This last consideration, and the number of roads issuing from it to the circumjacent cities, most of which roads had their distances given by computation only, made the determination of this point a grand *desideratum* in Indian geography. Mr. Hastings therefore, with that regard to useful science and improvements of every kind, which has ever distinguished his character, directed a survey to be made of the roads leading to it from the western frontier of Bahar; and also from the side of Allahabad. This was executed in 1782 and 1783, by Lieut. Ewart, under the direction of Col. Call, the Surveyor General. The result of this expedition was perfectly satisfactory. He began his measured line at Chittra, or Chettra, in Bahar, placed in 85° of longitude, and in lat. $24^{\circ} 12'$, in my map of Bengal and Bahar; and his difference of longitude from thence to Nagpour, in lat. $21^{\circ} 8' 30''$, was $5^{\circ} 16'$ west: by which Nagpour would be in $79^{\circ} 44'$. And from Nagpour back to Benares, in Ion.

* The termination, *conda*, or *qadat*, signifies fortress, and often occurs in the south part of India; as *colla*, and *vate*, which have the same signification, do in the north. *Gur* is used in the same sense occasionally in every part.

$83^{\circ} 18'$, in the same map, he made $87^{\circ} 25' 10''$, difference of longitude, east; which placed Nagpour in lon. $79^{\circ} 47' 50''$; or $3' 50''$ only, different from the other account; and this I suspect to arise partly from the error of his needle. If we close the account back again to Chittra, the place he set out from, he made only 4 minutes difference, in the distance out and home: and the road distance, was 600 B. miles from Chittra to Nagpour, only.

Taking the mean of the two accounts, the longitude of Nagpour will be $79^{\circ} 45' 55''$, or $79^{\circ} 46'$. The observations for determining the longitude at this place, by Lieut. Ewart, do not accord with the above account, by a considerable number of minutes: therefore I have not inserted them here, in expectation that they may be compared with corresponding ones, taken at places whose situations are already ascertained.

As Mr. Ewart's route to Nagpour, was by way of Burwah, Surgojah, and Ruttunpour: and from thence to Banares, by Gurry, the capital of Mundella, he ascertained the positions of those places, satisfactorily; and by that means added to the number of primary stations. The latitudes were constantly taken, in order to correct the route, in detail. Nor did his work end here: for his inquiries at Nagpour, furnish a number of estimated or computed routes from that capital to Burhanpour, Ellichpour, Aurungabad, Neermul, Mahur, Chanda, &c. that is, in every direction except the S E; whence we may infer the state of that tract to be wild, uncultivated, and little frequented. And it appears by his intelligence, that the way to Cattack is unsafe, in any direction farther south than Sumbulpour.

Nagpour, the capital of Moodajee Boonslah, the chief of the eastern Mahratta state, is a city of modern date; and though very extensive and populous, is meanly built, and is open and defenceless, save only by a small citadel; and that of little strength. The city is said, by Golam Mohamed, to be twice as large as Patna; but Mr. Ewart's account makes it but of a moderate size. Moodajee's

principal fortress, the depository of his treasures and valuables, is Gyalgur (called also Gawile) situated on a steep mountain, about 103 G. miles to the W by N of Nagpour. Each of the native princes in India, has a depository of this kind, and commonly at a distance from his place of residence: the unsettled state of the country making it necessary. The country round Nagpour is fertile and well cultivated, interspersed with hills of a moderate height: but the general appearance of the country at large, and particularly between Nagpour and Bahar, is that of a forest, thinly set with villages and towns. It is the western and northern parts of Moodajee's country, that produce the largest part of his revenue; together with the *chout*, or proportion of the revenues of Ellichpour, &c. held by the Nizam.

Ruttimpour is a city lying in the road from Bahar to Nagpour, and is the capital, and residence of Bembajee, who holds the government of the eastern part of the Nagpour territories, under his brother Moodajee. This place, also, has its position fixed very accurately by Mr. Ewart, in lat. $22^{\circ} 16'$, lon. $82^{\circ} 36'$. It is a *primary station* of great use, as it regulates all the positions between Cattack and Gurry-Mundella; and between Bahar and Nagpour. As its corrected position differs only 3 miles from the former estimated one, collected from Col. Camac's observations and inquiries: it serves as an additional proof, how much may be effected, by a careful examination and register, of the estimated distances on the roads: and this mode of improving the geography of India, may be adopted when all others fail. An intelligent person should be employed in collecting such sort of information, as Mr. Ewart collected at Nagpour; from the principal cities in the least known parts of Hindooostan; at the same time determining the position of such cities, by celestial observations: by which means, a number of fixed points would be established, from whence the computed distances might at once be laid off, and corrected. More could be done in this way, in a short time, towards completing the geography,

than most people can easily conceive; and, I flatter myself, it will be soon adopted.

Agimere, Ajmere, or Azmere, is the *primary point* on which the geography of the N W part of the tract in question, rests; and is determined by the estimated distances from Agra and Burhanpour. An itinerary kept by John Steel, reckons 119 cosses between Agra and Agimere; and Tavernier, who left Agimere to the north, in his way from Amedabad, reckoned 100 cosses from Bandersandry to Agra; and Bandersandry being 14 from Agimere, by Steel's account, we may take 114 for the whole distance, from Agra to Agimere. A map of Malwa and its neighbourhood, communicated by Mr. Bensley, places Agimere 180 G. miles to the west of Gwalior; and another map, communicated by Mr. Hastings, gives the same distance. By the construction, founded on Mr. Steel's 119 cosses from Agra, and which produce $17\frac{1}{2}$ G. miles, Agimere is found to be $10\frac{1}{2}$ miles short of the distance from Gwalior, in the above maps.

The parallel of Agimere, is determined by Sir Thomas Roe's computation of the distance from Burhanpour to Agimere, through Mundu and Cheitore; and that is 922 cosses, or 318 G. miles; and the intersection of the two distances from Burhanpour and Agra, happens in lat. $26^{\circ} 25'$, lon. $75^{\circ} 20'$. This is the position of Agimere in the map: no great accuracy, however, with respect to its parallel, can be expected, where the authority is nothing more than a single line of distance, and that a very long one. The Ayin Acbaree is totally silent concerning its latitude and longitude. Col. Call, in a map of his, communicated by Mr. Hastings, places it in the parallel I have assigned to it; and allows it to be distant from Burhanpour, 307 G. miles, and $192\frac{1}{2}$ from Agra; on what authority, I know not. Thevenot gives its latitude at $26\frac{1}{2}^{\circ}$.

Agimere was the capital of the soubah of the same name, in Acbar's division of the empire, and is probably the *Gagasmira* of Ptolemy. It is built at the foot of a very high mountain; on the

top of which, is a fortress of very great strength. It is about 290 miles by the road, from Agra, and yet the famous Emperor Acbar, made a pilgrimage on foot, to the tomb of a saint, there; to implore the divine blessing on his family, which at that time consisted only of daughters; but after this pilgrimage, he had three sons added to it. Jehanguire, his son and successor, occasionally kept his court here; and this occasioned the visits of Sir Thomas Roe to this place; as well as to Cheitore and Mundu, which lay in the way to it, from Surat.

Ougein can hardly be regarded as a primary station, as it effects the position of one place only; that is, Mundu.

It is placed on the authority of a route traced by Capt. Reynolds, who accompanied Sir Charles Malet, on an embassy from Bombay to Delhi, in 1784. Not knowing how far the distances were ascertained with precision, in this route, or whether the latitude of Ougein was, or was not taken, by Capt. Reynolds; I could only apportion the positions in the route, and Ougein amongst the rest, along the interval on my map, between Brodera, in Guzerat, and Budderwas, which occurs in Mr. Smith's line between Narwah and Seronge. It happens that the interval, differs only one mile from the distance, on the route: and Ougein, placed after the manner just described, will be in lat. $23^{\circ} 14'$; lon. $75^{\circ} 49'$.

This survey of Capt. Reynolds, came to hand long after the construction of the map of Hindoostan, in 1788; in which Ougein was placed in point of longitude, on the reports of the computed distances from Brodera and Bopaltol; and in parallel, by the computed distance from Mundu, and Burhanpour. Its position was then, lat. $23^{\circ} 26'$; lon. $75^{\circ} 56'$: not very wide of the present one, considering the nature of the authorities. Amongst the lines of distance, was one from Brodera, taken from a book of routes, which was obligingly communicated by Capt. Kirkpatrick; and, together with some others, as obligingly translated from the Persian, for me, by Mr. David Anderson; whose services on the memorable occasion

of negotiating the Mahratta peace, in 1782, and 1783, claim the united acknowledgments of Great Britain and Hindoostan. This route allowed 108 coses between Brodera and Ougein; which distance is actually 109 by Capt. Reynolds's apportioned interval; at 49 to a degree. But if we take the distance on the map, between Bopal and Brodera, through Ougein, which occasions a considerable bend in the line, it will be found to be 247 G. miles: and the computation of coses being 153 in Col. Camac's tables, the proportion will be about 37 to a degree; although the scale adopted for Malwa (in page 5), is 35 to a degree.

Capt. Reynolds's route must be regarded as a very capital one; being through a tract, which was heretofore the most vacant part of the map: and of which our general knowledge was so limited, that we supposed the courses of its rivers, to be to the south, and into the Nerbuddah; when, in fact, they were to the north, and into the Jumnah river. It settled also the position of Dhar, and of several other places, before unknown to us.

Mundu is placed in Capt. Reynolds's map, at 49 G. miles to the S W of Ougein: by D'Anville, $31\frac{1}{2}$ S S W: and in a map of Col. Muir's, $S\frac{1}{2}W$, 36. Sir Thomas Roe, who passed through it, in his way from Burhanpour to Chitore, reckoned it 66 coses from Burhanpour, equal to $94\frac{1}{2}$ G. miles. It is unlucky that the distance should be omitted in the march of Jehanguire, sent me by Capt. Kirkpatrick. There can be no doubt but that Mundu is more distant from Ougein, than either the map of D'Anville, or of Muir allows; but whether Capt. Reynolds's intelligence was accurate, I have no means of knowing. As far as I can collect from the march of Jehanguire, the distance cannot be more than 90 Acbaree coses; say 39 G. miles. Nalcheh is said to be $6\frac{1}{2}$ coses from Hasilpour: and the emperor appears to have made one stage from Dowlatabad, which is stated to be 11 or 12 coses from Ougein: and allowing for the stage to Hasilpour 4, the total will be about 22: but as Hasilpour was evidently out of the road from

Ougein to Mundu, 20 cosses may possibly be a sufficient allowance for the direct distance. Nalcheh, is situated in the suburbs, or at the foot of the hill of Mundu.

The cities of Ougein and Mundu are both of great antiquity. The former appears evidently both as to name and position, in the *Periplus* of the *Erythrean* sea, as well as in Ptolemy, under the name of *Ozene*. When the Ayin Acbaree was written, more than two centuries ago, Mundu (or Mundoo), was the capital of Malwa, and is described as a prodigious city, of 12 cosses, or 22 miles in circuit; and containing many monuments of ancient magnificence: but when it was visited by Sir Thomas Roe, in 1615, it was then fallen much to decay. It occupied the top of a very large and high mountain: few cities were ever placed in a bolder situation.

Ougein is the present capital of Madajee Sindia; who, with Tuckajee Holkar, possesses the principal part of Malwa. Holkar's capital is at Indore, or Endore, a modern city, which is said to lie about 20 cosses from Ougein, south, or south-eastwards. This is a part of Hindoostan, concerning which, we are but slightly informed; and of which, Sindia wished to keep us in ignorance: for it is said, he expressed a disapprobation of the brigade from Guzerat, taking its route through Ougein, in its way to the Bengal provinces: so that the detachment returned, nearly by the same road as it went, as far as Sirong.

Having now discussed the manner of establishing the *primary stations*, or those principal points, on which the general construction of the geography of the tract under consideration, depends; I shall proceed to give the detail of the manner, in which the intermediate spaces were filled up: but so great a variety of matter offers, that I hardly know where to begin; nor is it a point of much consequence: however, to preserve as much regularity as the subject is capable of, I shall begin on the western side, near Bombay; then go round by the north and east; and finish in the south.

When the map was constructed, which was previous to the arrival of any of Capt. Reynolds's inland surveys; I formed the geography of the tract between Bombay, Surat, and Poonah, from the best materials that I could procure: some of them, perhaps, of an indifferent kind; either from the want of leisure, or opportunity, in the collectors; or through apprehensions of raising dangerous suspicions in the minds of those, in whose power they were, at the time the observations were made. Such is the map of the road from Poonah to Nussergur (or Nusseratpour) and round to Soangur, which was described by Mefsiuers Farmer and Stewart, during the time they remained as hostages in the Mah-ratta camp; the particulars of which were obligingly communicated to me by Mr. Farmer. This map ascertains the situations of Casserbarry and Coondabarry Gaus; and, in particular, that of the city of Amednagur, once the capital of the soubah of the same name; but now better known by that of Dowlatabad. This city, which was the residence of the Emperor Aurungzebe, during his conquest of the Deccan and Carnatic, has generally been placed 50 miles to the south-east of its true position.

The road from Bombay to Poonah, is taken from a MS. map, made during the unfortunate compaign of 1778-9: collated with Mr. Smith's, and General Goddard's. And all the particulars along the coast, between Bombay and Surat, are also taken from General Goddard's map.

The road from Nimderah Gaut to Aurungabad, and back to Bahbelgong, and thence by Chandor and Saler-Mouler, to Noopour; is from M. Anquetil du Perron. Chandor occurs in Mr. Smith's route; as well as Unkei-Tenki, which we meet with in Tavernier, and which enables us to join the routes together.

Such was the nature of the materials on which the ground-work of this part of the map was originally formed: but I have since introduced the routes of Capt. Reynolds, as far as it was possible to assimilate the new matter with the old: and accordingly, a most in-

teresting route from Surat to Poonah, in which Nafuck-Trimbuck, Sineer, Juneer, Sungumner, &c. appear, is Capt. Reynolds's. Of his southern route from Poonah to the Kistnah river, we shall speak, in its place.

The south-east part of Guzerat is from a survey taken by order of the Bombay Government, collated with General Goddard's marches; and establishes among other points, that of Brodera, a principal fortrefs and town, in the north-east part of the tract lying between the rivers Tapy and Myhie: through which the great road leads from Surat to Ougein. Brodera lies in lat. $22^{\circ} 15' 30''$; lon. $73^{\circ} 11'$. The road to Amedabad, is entirely from General Goddard: and the country round about it, as well as the peninsula of Guzerat, owe their present appearance in the map, to the information contained in that, made by the Bramin SADANUND; of whom we have spoken in page 186. This genuine Hindoo map, contains much new matter: and the Ayin Acbaree assists in discriminating the valuable parts of it. In it is found the site of Mahmoodabad; in its turn, the capital of Guzerat, and founded by Sultan Mahmood, in the 11th century. The Ayin Acbaree describes the walls of it, as including a vast extent of ground; and speaks of it rather as an existing city, than as a place in ruins. This was in the latter part of the 16th century. Junagur, or Chunganur, a city and fortrefs in the heart of the peninsula, and a subject of Ferishta's history; together with many other positions, are pointed out, or illustrated, by this map; which, as we have said before, is the production of a native of Guzerat. Without a particular account of its author, one might have rested satisfied with its containing a great variety of particulars, although not arranged in geographical order: but it is remarkable, that it gives the form of Guzerat with more accuracy, than the European maps could boast of.

It does not however, clear up the ambiguity that has long existed, concerning the lower part of the course of the Puddar river: nor

am I yet informed whether that river discharges itself into the head of the gulf of Cutch, by one channel; or whether it forms several channels, and discharges itself through the many openings that present themselves, between the head of the gulf of Cutch, and the Indus. One thing only, we are certain of by means of this map; and that is, that one large river (or branch of a river) falls into the head of the gulf of Cutch; and that it appears to be the same river that has its source in the S W part of Agimere, and which is named by Europeans, the Puddar. The river that opens into the head of the gulf of Cutch, is named in the MS. map, *Butlaſſ*; taking its course by Sirowy, Palhanpour, and Radunpour (or Radimpour). The Ayin Acbaree does not enumerate among the rivers of Guzerat, or Agimere, either the Puddar, or Butlaſſ. It is more extraordinary that the Puddar should not be taken notice of, as the Ayin Acbaree describes an extensive tract of low fenny land, on the west of Amedabad, and which was periodically overflowed by the mouth of a river; when that very river is what we name the Puddar. It is certain that the name occurs only in D'Anville.* Tavernier takes no notice of it, in his route from Amedabad to Agra, although he must have crossed it. Possibly the word *Puddar*, may be no more than an appellative; or may be the same as *buddar*, or *budda*, in Soane-budda, and Ner-budda: and the proper name of the river, Butlaſſ, may have been omitted.

The peninsula of Guzerat is about 200 miles in length, and 140 wide, formed by the Arabian sea (called by the Asiatics the sea of OMMAN) and the gulfs of Cambay and Cutch; both of which penetrate far within the continent, as the dimensions of the peninsula shew. By the numerous subdivisions of this tract, and more by the sum of its revenue, in the Ayin Acbaree, we are led to consider it as of very great importance, in the opinions of the Moguls. Surat

* Since the above was written, I found the same name in a map of Persia, drawn and engraved at Constantinople, in the year 1729. The names are in Arabic: the scale between six and seven-tenths of an inch, to a degree.

too, that great emporium, situated in its vicinity, had its share in raising the value of the natural products of it ; among which, cotton is the staple article. Being a frontier province, as it respects the access by sea, Guzerat contains a greater mixture of races, and a greater variety of religions, than any other province. The Ayin Acbaree says, " From the liberality of his majesty's (Acbar's) disposition, every sect exercises its particular mode of worship, " without molestation." What a happy change since Mahmood, in the 11th century ; whose principal delight was the destruction of Hindoo temples ! The famous pagoda of Sumnaut, which was destroyed by Mahmood, stood within the peninsula, of which we have been speaking ; and its particular site is pointed out by circumstances, in the Ayin Acbaree, and Ferishta. For the former says, " Puttan on the sea shore, is also called Puttan Sumnaut." And the latter, " it was situated upon the shore of the ocean, and " is at this time to be seen in the DISTRICTS of the harbour of DEO " (Diu) under the dominion of the idolaters of Europe." This appears to refer plainly to Diu, in the hands of the Portuguese : and a town of the name of Puttan, is about 30 miles to the NW of Diu ; and on the sea shore : but this Puttan has *Billowell*, or *Velloul*, prefixed to it. Several particulars, in the Ayin Acbaree, prove that Sumnaut is nearer to Diu point, than to that of Jigat ; where M. D'Anville placed it. It was near the river Sirsooty, and in the *second*, or Puttan division of Guzerat. Mangalore (or *Mangarole*), and Joorwar (or *Choorwar*), were in the same division with Sumnaut ; and these places, in Sadanund's map, are in the quarter towards Diu. Lastly, Jigat, or Jugget, which includes the pagoda and point of that name, is reckoned the *fifth* division of Guzerat. (Ayin Acbaree, Vol. II. page 81, to 83.)

The ancient city of Nehrwaleh, the capital of the country of Guzerat, or rather perhaps of a kingdom, of which Guzerat only constituted a part, in the 19th century, has hitherto been misplaced ; though M. D'Anville's idea came the nearest to it.

He supposed it to have stood where Amedabad does (Eclaircissements, page 74.); but the fact appears to be, that Puttan, or Pattun, which is situated in the north part of Guzerat, and on a branch of the Puddar river, stands on the site of Nehrwaleh. The information came from my friend Capt. Kirkpatrick; and it will be found that the notices concerning it, in Edrisi, and in the Ayin Acbaree, convey the same information. The tables of Nasereddin and Ulug Beig, give its latitude (Nehelwara) at 22 degrees; but it is nearer 24°.

Ferishta, in his History of Hindooostan, mentions it as a city of Guzerat. Sultan Mahmood, in 1022, passed through it in his way to Sumnaut; and found its situation so pleasant and so convenient, that he conceived a design of making it his capital. Ferishta, in another work, after mentioning Nehrwaleh, adds, "better known in these days, by the name of Puttan." Shahnawaz also, giving an account of the death of the great Byram (Acbar's minister), says that it happened at Puttan, "anciently called Nehrwaleh."* Edrisi, at a later period than that of Sultan Mahmood's invasion, speaks of it under the name of *Nabroara*, situated at eight journies from Baruh (or Baroach). The road lay through an open country, free from hills; and the towns or cities of *Hanauel* and *Dolca*, both of which stood near the foot of the mountains, that lay to the north-east; occurred in this road. Hanole, appears in the route from Brodera to Ougein, mentioned in page 220; and the fortres of *Paygurrab*, on a hill, three cosses to the right (*i. e.* to the south-eastward); with the distance of 14 cosses from Brodera, to the NE; mark it to be the place in Capt. Reynolds's route named Halole; near the foot of the mountains of Champaneer. In point of general situation, it lies about NNE $\frac{1}{2}$ E from Baroach; and at the distance of more than three journies. We find

* Kirkpatrick's MSS.

Halole, also in Sadanund's map, in nearly the same position: as well as *Dolaue*, in the line of the route from Baroach to it; which may possibly be the *Dolca* of Edrisi. Hanole, however, cannot well be any other than his Hanatiel, by the position.

Puttan, or Pattun, bears to the west of north from Baroach, according to the ideas of Capt. Reynolds, and Sadanund: and in distance by the former, about 134 G. miles; full eight journeys of ordinary travellers, from Baroach, through Hanole. The bend of the road to the N E, through Hanole, is easily accounted for: it was to avoid the tides in the rivers that fall into the gulf of Cambay (*Sinus Barygazenus*), and more particularly that of Myhie, a large river that falls in, at the head of the gulf; the passage of which is rendered very uncertain, and dangerous, by reason of the bores. In the present times, the Myhie is crossed 30 or 40 miles above its mouth, and far out of the line of the road, between Baroach and Amedabad, to avoid this danger. Therefore, we may conclude, that the communication between the capital (Nehr-waleh) and its port (Baroach), was by a road, that was at all times practicable; for it is said, that *there was a carriage road between them* (Edrisi, p. 62). And here it will be proper to mention, that the Ayin Acbaree (Vol. II. p. 76.) describes a road of 100 cofses (190 road miles) long, leading from *Puttan* to *Berodeh*. I rather suppose that Baroach should be read for Berodeh (or Baroda); for the distance will agree much better to that. The Ayin Acbaree also says (page 77), that Puttan was *at first* the seat of government; then Champaneer; and last of all Amedabad.

A very curious particular relating to Nehrwaleh, is, that its king was styled BALHARA, or King of Kings; from which title, we might infer, that the rest of the Indian princes, his neighbours, acknowledged him in some degree, as their superior. Both Edrisi, and Masoudi, mention this circumstance. Ptolemy's *Baleocur* may probably mean the capital of the same kingdom, though

somewhat misplaced. It is remarkable also, that Edrisi mentions the worship of the idol *Bodda*, or *Bud*, by the people of Nahroara.*

Although the gulfs of Cambay and Cutch penetrate so deeply within the land, yet so far from rendering the sea smoother, or the navigation safer, they occasion such high and rapid tides, and are so thickly sown with sand-banks, that few places are more dangerous. The *bore*, which means the flood tide, rushing in suddenly, and forming a body of water, elevated many feet above the common surface of the sea; and of course levelling every obstacle that opposes it; rages here with great violence: covering in an instant the sand-banks, which before appeared dry and firm. I have accounted for the terror with which Alexander's followers were struck, at the mouth of the Indus, from this dreadful phenomenon. See the Introduction, page xxiv.

Capt. Joseph Price had the misfortune to be carried up to the head of the gulf of Cutch, by pirates; who captured his ship, after a most gallant and obstinate defence, of two days: but he was afterwards treated with great respect and tenderness, and permitted to depart by land, for Bombay. He accordingly traversed the isthmus, to Gogo; and reports, that the country in that tract, is generally flat; having only a few eminences, and those fortified. The soil is dry and sandy, as is common to Guzerat in general; for, as the author of the *Ayin Acbaree* says, the rain there does not occasion mud. This may be inferred from the nick-name of *Gurdabad*, or dust-town; bestowed on Amedabad, by Jehanguire: who (by the bye) appears to have taken a wonderful dislike † to a situation that has been much praised by other travellers.

* Baroach has been, in different ages, a port common both to *Nebrualeb* and *Tagara*: of which last, the author of the *Periplus* of the Erythrean sea, makes particular mention. The former was eight journeys, the latter ten, from Baroach. Tagara should be in the Deccan, according to the *Periplus*: though I think it furnishes no ideas that enable us to form a judgment, even of its general situation. Ptolemy places it nearer the position that answers to Burhanpour, or its neighbourhood, than any other.

† Kirkpatrick's MSS.

The road from Amedabad to Agimere, by Meerta, is chiefly from a map constructed by Col. Call, and communicated by Mr. Hastings. To this I have added Tavernier's particulars of the road, as he travelled this way from Amedabad to Agra. I know not from whence Col. Call had his particulars, but they appear to be perfectly new. Tavernier's distance is enormous, according to the scale of the cos; but it is to be considered, that the road is very circuitous, and no less mountainous; so that no rule can well be applied, for reducing the road distance, to a straight line.

The positions of Agimere, Jaepour, and Ougein, have been already discussed, as well as the places situated in the line of Mr. Smith's route. The space included between these points, and which is chiefly situated in the soubah of Agimere, has undergone a very considerable improvement in its geography, since the publication of my last map; by the contributions of Mr. Hastings, Mr. Bensley, and Col. Popham. I know not who the authors of the several maps in question were; they have, however, my acknowledgments for the assistance I have received from them: and I grieve to reflect, that some of the personages who furnished the most interesting matter towards the improvement of this work, have not lived to be witnesses of the success of their labours. The tract in question includes, among others, the provinces of Cheitore, and Oudipour, subject to the Rana, or chief prince among the Rajpoots; and the antiquity of whose house may be gathered, by the name *Rbanne*, appearing in Ptolemy, nearly in its proper position, as a province. The province of Agimere in general has ever been the country of Rajpoots; that is, the warrior tribe among the Hindoos, and which are noticed in Arrian, and Diodorus: and Cheitore, or Oudipour (which I consider as synonymous), is, I believe, reckoned the first among the Rajpoot states. The whole consists, generally, of high mountains divided by narrow valleys; or of plains, environed by mountains, accessible only by narrow passes and defiles: in effect, one of the strongest countries in the world;

yet having a sufficient extent of arable land: of dimensions equal to the support of a numerous population; and blessed with a mild climate; being between the 24th and 28th degrees of latitude: in short, a country likely to remain for ever in the hands of its present possessors; and to prove the asylum of the Hindoo religion and customs. Notwithstanding the attacks that have been made on it, by the Gaznavide, Patan, and Mogul emperors, it has never been more than nominally reduced. Some of their fortresses, with which the country abounds, were indeed taken; but THE SPIRITS OF INDEPENDENT NATIONS, DO NOT RESIDE IN FORTRESSES; nor are they to be conquered, with them. Accordingly, every war made on these people, even by Aurungzebe, ended in a compromise, or defeat, on the side of the assailants.

Cheitore was the capital of the Rana in the days of his greatness. It was a fortress and city of great extent, situated on a mountain; but has been in ruins since the time of Aurungzebe in 1681: and had once before experienced a like fate from the hands of Acbar, in 1567. The position of this place, is inferred from the account of Sir Thomas Roe, who made it 105 cofses from Mundu, and 51 from Agimere. From this I have been led to place it in lat. $25^{\circ} 21'$, lon. $74^{\circ} 56'$. The different MS. maps, give its position more to the west; and indeed, one of them, so far as to throw it near the great road from Amedabad to Meerta. The cause of this, is a mistake in the difference of longitude between Agra and Guzerat, which has been reckoned too much in these MSS. Cheitore, placed as above, is only about 181 G. miles on the west of Narwah: Mr. Hastings's MS. map gives this distance at 196; Col. Popham's at 195; Col. Muir's at 193; and a map of Malwa 231. All but the last, assign it the same parallel as Narwah: while my construction places it 19 minutes more southwardly: the map of Malwa, alone places it 18' south of Narwah. Mr. Hastings's copy agrees with the construction, in making it bear about SSW from Agimere; but shortens the distance about 6 cofses.

Rantampour, a very celebrated fortres in the Indian histories, is situated in the eastern quarter of Agimere, and has its position from the same MSS.: and in the S E quarter of the same soubah, many other noted fortresses and residencies of rajahs, are extracted from the same MSS.; assisted by Col. Camac's tables of routes: such as Kotta, Boondi, Gandhar, Thora, Suisopour, Sandri, Mandelgur, &c. And in Marwar, or the north division of Agimere, Nagore, Bicaneer, Catchwana, Didwanah, Samber, &c. &c. The upper part of the courses of the Chumbul, Sinde, and Sepra rivers, appear now, for the first time, in some sort of detail; though it must be long, ere the geography of parts so remote from our establishments and influence, can be in any degree correct; and the reader will pardon his being reminded, that the geography we are treating of, includes an extent equal to one half of Europe.

The Ayin Acbaree has furnished some new ideas respecting the division of the soubah of Agimere. It consisted at that time of three grand divisions, Marwar, Meywar, and Hadowty (or Nagore); and these contained seven circars or subdivisions, Agimere, Cheitore, Rantampour, Joudypour, Sirowy, Nagore, and Beyka-neer (or Bicaneer). Marwar, as including the circar and fortres of Agimere, has grown almost synonymous with Agimere, in common acceptation. The extent of this province, as given by the same book, is 168 cooses, or about 320 B. miles, from east to west; and 150 cooses, or 285 B. miles, from N to S: and its extent on the map, justifies this account. Such is the province of the Rajpoots. From the indulgence granted to this tribe throughout India, namely, that of feeding on goats' flesh, I think it may be inferred, that the custom originated in this mountainous country. The grain cultivated there, is chiefly of the dry kind. The taxes amounted (in the time of Acbar) to no more than a seventh, or eighth, of the produce of the harvest.

We come next to the Gohud and Narwah provinces, between the Chumbul and Sinde rivers. Much of this tract was described

by Mr. Cameron, in a map communicated by the late Col. Camac: but even a province equal to one of the largest English counties, is lost in such a map, as the one under consideration. Beyond this, on the east and south-east, to the Betwah river, is filled up chiefly with Col. Camac's information. Between that river, and the Nerbuddah, the Persian book of routes (see page 220) furnishes the road between Callinger and Bilsah, and becomes interesting by its leading through Sagur (the *Sageda*, of Ptolemy), a capital fortress and town, situated on a branch of the Cane river, about 55 G. miles to the eastward of Bilsah. This route was also translated by Mr. Anderson. It gives only 78 cosses between Bilsah and Pannah (or Purna, the famous diamond mine of Bundelcund, and supposed to be the *Panasa* of Ptolemy); which, I should apprehend, was a mistake; as the distance, on a straight line, is 165 G. miles. Sagur, however, being stated at 26 cosses from Bilsah, a known point, does not allow of being far misplaced, by an error in the scale.

Bilsah is placed, by a route of Col. Camac's, leading from Sirong to Bopal; and being confined by these points on two sides, and by the routes of Goddard and Smith, on the others; it cannot be far out of its place. Bilsah, which is almost in the heart of India, affords tobacco of the most fragrant and delicate kind, throughout that whole region; and which is distributed accordingly.*

Chanderee, and other places along the course of the Betwah, are either from Col. Camac's routes, or Col. Muir's map. Chanderee is a very ancient city, and within the province of Malwa. The Ayin Acbaree says, "there are 14,000 stone houses in it." It

* A difference of opinion seems to have prevailed, for some time, whether tobacco came originally from Asia or America. It is so universally disseminated over Hindoostan and China, and appears to have been in use so long in the former, that it is not regarded by the common people, otherwise than as indigenous. However, it is now ascertained, very satisfactorily, that it was carried thither by the Portuguese: for there are in existence, copies of certain prohibitory edicts concerning it, issued by the Mogul emperors: and in those, tobacco is mentioned, as "*a pernicious plant, introduced by Europeans.*" It is mentioned by Olearius, as a plant in common cultivation in Persia, about the year 1633.

is now, like most of the ancient cities of Hindoostan, fallen into decay; but is still the residence of a principal rajah. The routes in the central parts of Malwa, are from Col. Muir's map: Hindia, is from Tavernier, supposing *Andi* to be meant for it. It is astonishing how he could so far mistake the course of the Nerbuddah at that city, as to suppose it ran into the Ganges. It seems to be the *Inde* of Ptolemy.

A Hindoo map of *Bundela*, or Bundelcund, including generally the tract between the Betwah and Soane rivers, and from the Ganges to the Nerbuddah; was obligingly communicated by Sir Charles Boughton Rouse, who also translated the names in it, from the Persian. This map points out several places that I had not heard of before; and assists in fixing many others, of which I had been only partially informed.

The country between Mirzapour and the heads of the Soane and Nerbuddah, was explored by the late Major William Bruce, who so eminently distinguished himself at the escalade of Gwalior, in 1780.*

* The circumstances attending this capture are so very curious, that I cannot help inserting them here, though confessedly out of place. They are extracted from the printed account of *GWALIOR*, which accompanies a beautiful engraved view of that fortress, published in 1784.

"The fortress of Gwalior stands on a vast rock, of about four miles in length, but narrow, and of unequal breadth; and nearly flat at the top. The sides are so steep, as to appear almost perpendicular in every part; for where it was not naturally so, it has been scarped away: and the height from the plain below, is from 200 to 300 feet. The rampart conforms to the edge of the precipice all round; and the only entrance to it, is by steps running up the side of the rock, which are defended, on the side next the country, by a wall and bastions; and further guarded by seven stone gateways, at certain distances from each other. The area within, is full of noble buildings, reservoirs of water, wells, and cultivated land; so that it is really a little district in itself. At the NW foot of the mountain is the town, pretty large, and well built; the houses all of stone. To have besieged this place, would have been vain; for nothing but a surprise, or blockade, could have carried it.

"A tribe of banditti, from the district of Gohud, had been accustomed to rob about this town; and once, in the dead of night, had climbed up the rock, and got into the fort. This intelligence they had communicated to the Rana, who often thought of availing himself of it, but was fearful of undertaking an enterprize of such moment, with his own troops.

"At length, he informed Col. Popham of it; who sent a party of the robbers to conduct some of his own spies to the spot. They accordingly climbed up in the night, and found that the guards generally went to sleep, after their rounds. Popham now ordered ladders to be made, but with so much secrecy, that, until the night of the surprise, a few officers only knew it. On the 3d of August, 1780, in the evening, a party was ordered to be in readiness to march, under the command of Major Bruce; and Popham put himself at the head of two battalions, which were immediately to follow the storming party. To prevent as much as possible, any noise in approaching or ascending the rock, a kind of shoes, of

During his expedition, he verified a fact which had been long doubted, though strenuously insisted on by the natives; (viz.) that the Soane and Nerbuddah rivers had their common source from a pond, or lake, on the southern confines of the Allahabad province. These rivers do literally flow from the same lake; making, conjointly with the Ganges, an island of the southern part of Hindoo-stan: and flowing in opposite directions 1500 miles. The course of the Nerbuddah river is ascertained, only in certain points where it happens to be crossed by any of the great roads here described: excepting only in the neighbourhood of Baroach. All the intermediate parts are drawn from report. It is represented to be as wide at Husingabad Gaut, as the Jumnah is at Calpy: but fordable in most places, during the dry season.

We learn from Mr. Ewart, that the Soane is named Soane-buddah, by the people who live near the upper part of its course; as its sister river is named Ner-buddah. The upper part of the course of

woollen cloth, were made for the sepoys, and stuffed with cotton. At eleven o'clock, the whole detachment marched from the camp at Reypour, eight miles from Gwalior, through unfrquented paths; and reached it a little before day break. Just as Bruce arrived at the foot of the rock, he saw the lights which accompanied the rounds moving along the rampart; and heard the centinels cough (the mode of signifying that *All is well*, in an Indian camp, or garrison); which might have damped the spirit of many men, but served only to inspire him with more confidence; as the moment for action, that is, the interval between the passing of the rounds, was now ascertained. Accordingly, when the lights were gone, the wooden ladders were placed against the rock, and one of the robbers first mounted, and returned with an account that the guard was retired to sleep. Lieut. Cameron, the engineer, next mounted, and tied a rope-ladder to the battlements of the wall; this kind of ladder, being the only one adapted to the purpose of scaling the wall in a body (the wooden ones only serving to ascend from crag to crag of the rock, and to assist in fixing the rope-ladder). When all was ready, Major Bruce, with twenty sepoy grenadiers, ascended without being discovered, and squatted down under the parapet; but before a reinforcement arrived, three of the party had so little recollection, as to fire on some of the garrison who happened to be lying asleep near them. This had nearly ruined the whole plan: the garrison were, of course, alarmed, and ran in great numbers towards the place; but ignorant of the strength of the assailants (as the men fired on, had been killed outright), they suffered themselves to be stopped, by the warm fire kept up by the small party of grenadiers; until Colonel Popham himself, with a considerable reinforcement, came to their aid. The garrison then retreated to the inner buildings, and discharged a few rockets, but soon afterwards retreated precipitately through the gate; while the principal officers, thus deserted, assembled together in one house, and hung out a white flag. Popham sent an officer to give them assurances of quarter and protection; and thus, in the space of two hours, this important and astonishing fortress was completely in our possession. We had only 20 men wounded, and none killed. On the side of the enemy, Bapogee, the Mahratta governor, was killed, and most of the principal officers were wounded."

the Soane, is drawn in the same manner as the Nerbuddah is described to be; and the fortress of Bandoo-gur, near it, is from the information of Mr. Ewart.

The *data* for the positions of Nagpour and Ruttunpour, are already given in pages 216 and 218, in the discussion of the primary stations. Many roads lead from each of these places; but two only were measured: one from Chittra in Bahar, through Ruttunpour, to Nagpour; the other from Nagpour, through Gurrah, to Rewah, and Mirzapour, on the Ganges. The first, by determining several points, such as Surgoojah, Dongong, Kyragur, &c. enabled me to correct some of Col. Camac's estimated routes; and the latter, besides giving the position of Gurrah, the capital of Gurry-Mundella; assisted in settling Mundella, and Deogur. The estimated routes from Nagpour, were to Ellichpour, Burhanpour, Narnalla, Gawille (or Gyalgur), Aurungabad, Jaffierabad, Mahur, Notchengong, Neermull, Chanda, and Manickdurg; all collected by Mr. Ewart. All these proved very satisfactory, as they corresponded with the distances of the several intervals: and Nagpour being determined with the precision requisite for a general map, there is little doubt but that all the places between Bengal and Bombay, are placed within a few miles of their respective positions: that is, admitting the longitude of Bombay to be right, in respect of Calcutta.

Besides the routes collected by Mr. Ewart, Mr. Watherstone obligingly communicated his route from Hufsingabad Gaut, on the Nerbuddah, to Nagpour. He was sent thither on business of the highest political importance, by General Goddard; whose army was then encamped on the banks of the Nerbuddah, in the course of its celebrated march across the continent.* His journey pointed

* In justice to General Goddard's memory, I think it incumbent on me to observe, that the author of the History of Hyder Ally (published in 1784), though seemingly inclined to compliment him, has depreciated the merits of the undertaking, by over-rating the numbers and quality, of General Goddard's troops. M. D. L. T. states the strength of the army at 8000; of which, says he, 1200 were EUROPEANS. The truth is, that the detach-

out, among other particulars, the source of the Tapti (or Surat river), whose spring is more remote than we had an idea of. It rises at Maltoy, a town situated 42 cofses to the NW of Nagpour: so that its course is full two-thirds of the length of that of the Nerbuddah. The distance between Hussiaingabad and Nagpour, is 100 cofses.

Ellichpour is a fine city, and was anciently the chief city of Berar *proper*; by which I mean to distinguish the province known in the Ayin Acbaree, by that name: for our modern acceptation of Berar, includes the whole country between Dowlatabad and Orissa; the eastern part of which, was neither reduced by Acbar, nor even known, in particulars, to the author of the Ayin Acbaree. At present, Ellichpour is the capital of a large province or district, subject to the Nizam; but paying a *chout*, or nominal fourth part of its revenues, to Nagpour.

Deogur, or Deogire,* was anciently a capital city, and the residence of the Rajah of Goondwaneh; or, as he is called in the Ayin Acbaree, the Goond Rajah; the Nerbuddah being then the southern limit of Hindoostan. This province appears to be one of the most elevated in Hindoostan, seeing that the rivers Tapti, Bain, and Nerbuddah, descend from it. Malwa, is unequivocally the highest; for there, the rivers descend in every direction.

Golam Mohamed's routes, being added to those collected by Mr. Ewart, contribute much towards the improvement of the map, in the interval between the measured lines by Mr. Ewart: and before we were favoured with that gentleman's most valuable materials (which entirely supersede the former as far as they go), Golam Mohamed's contributed largely towards the geography of the

ment consisted of 103 European commissioned officers, and 6624 native troops of all denominations; and without a single corps of Europeans. In the *return* from whence this was copied, the servants and followers of this little army, amount to no less a number than 19,779: besides the *bazaar*, or market people, not included in the return: and these are estimated at 12,000 more: in all, more than four followers to each fighting man.

* This must not be confounded with a city of the same name, which stood near the site of Dowlatabad.

country round Nagpour.* These we owed to the late Col. Camac, who, to his praise, employed a part of his leisure time, during his command on the western frontier of Bahar, in inquiries concerning the state of politics, government, geography, and nature of the countries included in the abovementioned tract: the geography of which had, till then, been very little known to us.

Sumbulpour, or Semilpour, is determined by its reputed distance from Ruttunpour, and from four different points in the Bengal survey; from routes collected by Col. Camac. Unluckily, I had placed Sumbulpour in the map, as it now stands, before I had seen Mr. Ewart's papers; by which it appears to be ten or eleven miles to the south-west of its true position; being in $21^{\circ} 25'$ lat. and $83^{\circ} 40'$ lon.; when it ought to be in $21^{\circ} 34' 30''$, and $83^{\circ} 46' 30''$. Had this new position been established on the same principle as Nagpour and Ruttunpour; that is, mathematically; I should not have scrupled to eraze a large portion of the map, to gain so desirable an advantage: but as it yet rests on computed distances, I am content to point out the error in this manner.

The distance of Sumbulpour from Ruttunpour, which is hardly affected by the new matter, is by one account 53 cofses; and by another 56: the mean, $54\frac{1}{2}$ cofses, or 78 G. miles, is the distance adopted.

Then, Sumbulpour is from Doesah in Bahar	-	91 cofses
Nowagur in Bahar	-	59
Raidy in Bahar	-	67
Beurah in Bahar	-	41

All these places being nearly in one line of direction from Sumbulpour, admit of a mean being struck between them: and this

* The number of estimated cofses between Burwah and Nagpour, was 196, and from thence to Aurungabad, $163\frac{1}{2}$; total $359\frac{1}{2}$. And the distance on the map is $517\frac{1}{2}$ G. miles; which is nearly equal to the above number of cofses.

mean appears to be $66\frac{1}{2}$ from Rайдy, or 95 G. miles. The intersection of these lines of distances, from Ruttunpour and Rайдy, is nearly at right angles; and they meet, as is said above, in lat. $21^{\circ} 34' 30''$, lon. $83^{\circ} 46' 30''$. This position falls out 142 G. miles from Cattack; and Mr. Motte, who traced this road, together with the course of the Mahanada, in 1766, made the distance 129: he also reckoned 51' difference of latitude, and it appears to be $64\frac{1}{2}$.

The lower road from Nagpour to Sumbulpour, through Raipour, is from Golam Mohamed; and the upper, by Dumdaah and Soorangur; is Mr. Thomas's; communicated by Mr. Ewart. The lower route, which is checked, laterally, by the distance of Raipour from Ruttunpour, points out also the course and navigable part of the Mahanuddy, or Mahanada river. Arung is the furthest point to which it is navigable, from the sea. The upper road crosses it near the conflux of the Hutsoo river, which is also navigable, to Dungong. By the deviation of the road between Nagpour and Soonpour, from the true line of direction towards Cattack, it may be inferred that the country on the south of it, is either desert, or in an uncivilized state. We are, however, not well informed on this point, but have every reason to suppose it; and the rather, as Mr. Thomas mentions Dewancole, near Soonpour, as a retreat of banditti.

Soorangur, where the roads divide to Sumbulpour, and Soonpour, is the burial place of the late Mr. Elliott; who died on his way from Calcutta to Nagpour, in October, 1778. At that crisis, when the fate of the British empire in India, hung suspended by a slender thread, this gentleman was sent by Mr. Hastings, on an embassy to the court of Nagpour; which at that time, might be said to hold the balance of power, in Hindooostan. Zeal for the public good, prompted him to undertake a service of great personal danger; and which eventually occasioned his death. Mr. Hastings caused a monument to be erected to his memory, on the spot: and also commemorated his early genius and attainments, and no less

early death, in some lines, which make part of an imitation of an ode of Horace.* Soorangur is about 270 road miles short of Nagpour, and 470 from Calcutta; and lies out of the direct road.

I observed above, that Sumbulpour is misplaced; and this occasioned an error in all the places between Ruttunpour and Cattack. For the distance between Soorangur and Soonpour is too small; and between the latter and Cattack, too great; the Mahanada not making so deep a winding or elbow, between Boad and Sumbulpour, as Mr. Motte described, and as it is represented in the map. Golam Mohamed reckoned only 137 cosses between Nagpour and Sumbulpour: but the construction will not allow of less than 157; which is a mistake not easily to be accounted for.

Boad, a fort near the Mahanada, is said by Col. Camac to be 40 cosses only, from Gumsoar, in the Ganjam district: by construction it is 46; which difference is probably occasioned by the mistake in the position of Sumbulpour. On the west of Boad, and near the Mahanuddy river, Mr. Thomas passed a town of the name of Beiragur, which I take to be the place noted in the Ayin Acbaree, as having a diamond mine in its neighbourhood. There is indeed a mine of more modern date, in the vicinity of Sumbulpour; but this whole quarter must from very early times have been famous for producing diamonds. Ptolemy's *Adamas* river answers perfectly to the Mahanuddy: and the district *Sabaræ*, on its banks, is said to abound in diamonds. Although this geographer's map of India, is so exceedingly faulty, in the general form of the whole tract; yet several parts of it, are descriptive. When we perceive the head of the river just mentioned, placed among the Bundela hills, and Arcot

* An early death was ELIOTT's doom,
I saw his op'ning virtues bloom,
And manly sense unfold;
Too soon to fade! I bade the stone
Record his name 'midst hordes unknown,
Unknowing what it told.

HOR. Book II. Ode xvi.

[See the New Annual Register for 1786.]

thrust up, into the middle of India; we ought to reflect, that Ptolemy's ideas were collected from the people who sailed along the coast, and who described what they had seen and heard, without regard to what lay beyond it: and moreover, made use of too wide a scale; as commonly happens, when the sphere of knowledge is confined, and the geographer works *ad libitum*, from the coast, towards the interior of an unknown continent. Whoever consults Ptolemy's map of India, should carry these ideas in his mind: that the construction of it is founded on three lines; one of which, is that of the whole coast, from the gulf of Cambay, round to the Ganges; a second, the course of the Indus, and the gulfs of Cutch and Cambay; and the third, the common road from the Panjab to the mouths of the Ganges. The objects within these lines, have a relative dependence on each line, respectively; and are invariably placed at too great a distance within them: it therefore happens, that an object which should have occupied a place near one of the lines, is thrust towards the middle of the map; and this being a general case, places on opposite sides of India, are crowded together, as Arcot and Sagur (*Sagbedu*) are. At the same time, the central parts are wholly omitted; as being, in reality, unknown. Some may treat with ridicule, what I have said on the score of PTOLEMY: but a work which has travelled down to us from the second century of our æra, must have possessed something worthy to recommend it, and to keep it alive: and at least merits an explanation.

Mr. Motte's route along the Mahanuddy, was described from computed distances, and bearings by a compass. He also took the latitude of Sumbulpour, in a rough manner, and made it nearly the same as that of Balasore; that is, about 21 degrees and a half. The mouths of this river, which form an assemblage of low woody islands, like the Ganges, and many other rivers; have never been traced, but are described from report only. At the mouth of the

principal channel, near False Point, is a fortified island, named Cajung, or Codjung.

This brings us into the neighbourhood of the Chilka lake, which bounds THE CIRCARS (or NORTHERN CIRCARS) on the north. This lake seems the effect of the breach of the sea, over a flat, sandy shore, whose elevation was something above the level of the country within. Pulicat lake appears to have the same origin. Both of them communicate with the sea, by a very narrow but deep opening; and are shallow within. The Chilka lake is about 40 miles in length from N E to S W; and in most places 12 or 15 wide; with a narrow slip of sandy ground, between it and the sea. It has many inhabited islands in it. On the N W it is bounded by a ridge of mountains; a continuation of that, which extends from the Mahanuddy to the Godavery river; and shuts up the circars towards the continent. The Chilka, therefore, forms a pass on each side of it, towards the Cattack province. It is described from the observations of Mr. Cotsford, and of Capt. Campbell; though, possibly, the extent of it may be somewhat more than is given towards the north. It affords an agreeable diversity of objects: mountains, islands, and forests; and an extended surface of water, with boats and small vessels sailing on it. To those who sail at some distance from the coast, it has the appearance of a deep bay; the slip of land not being visible.

The famous pagoda of Jagarnaut, lies a few miles to the eastward of this lake, and close on the sea shore. It is a shapeless mass of building: and no otherwise remarkable, than as one of the first objects of Hindoo veneration; and as an excellent sea-mark, on a coast which is perfectly flat, and exhibits a continued sameness; and that in a quarter, where a discriminating object becomes of the highest importance to navigators. It has no claim to great antiquity: and I am led to suppose, that it succeeded the temple of

Sumnaut in Guzerat; which was destroyed by Mahmood in the 11th century. Possibly the remote situation, and the nature of the country near it (which, on the side of Hindoostan *proper*, is shut up by mountains and deep rivers), might recommend the spot, where Jagarnaut is situated: for we find Orissa was not an early conquest.

The circars are described from various authorities. The construction of the sea coast has already been discussed in the first Section. Our possessions in this quarter, extend no where more than 50 B. miles inland; and in some places not more than 20; between the Chilka lake, and the Godavery river: and between this river and the Kistnah, about 70 or 75. So that the circars form a slip of territory, bounded on one side by the sea; and on the other, generally, by a ridge of mountains, that runs nearly parallel to it. Col. Pearse's line, runs entirely through this tract; and may be considered, in our geography, as the foundation, on which a superstructure has been raised, by the labours of many different people. The district round Ganjam, known by the name of Itchapor, and which is one of the divisions of the Cicacole country; is drawn from Mr. Cotsford's very elegant map. The Ticky district, adjoining to it, on the south, is chiefly from Lieut. Cridland's surveys; and extends to Cicacole town (the *Cocala* of Ptolemy). From Cicacole, to Visagapatam, including the country to the foot of the mountains, is taken from an old MS. map of Mr. Dalrymple's: and from thence to Rajamundry, is taken from a map of Col. Ford's marches, collated with Montresor's large map, at the East-India House. It is all along to be understood, that Col. Pearse's line (corrected as in page 10), forms the scale of the parts in question. The remaining part of the circars, that is, between the Godavery and Kistnah rivers; is chiefly taken from a map of that country, published by Mr. Dalrymple: the groundwork of which is composed of the late Major Stevens's materials.

The routes to Joypour and Badrachillum, are on the authority of Mr. Claud Ruisell; and the position of the latter place, which is very near to the Godavery, accords with Mr. Montresor's idea, as expressed in his large map.

The Godavery river, or Gonga Godowry (sometimes called the *Gang* in Ferishta's History), was, till very lately, considered as the same with the Cattack river, or Mahanuddy. As we had no authority, that I can find, for supposing it, the opinion must have been taken up, on a supposition that there was no opening between the mouths of the Kistnah and Mahanuddy (or Cattack river), of magnitude sufficient for such a river as the Gonga. It could not be for the want of space sufficient for the Cattack river to accumulate in, independent of the Gonga; for the distance is as great from the mouth of the Cattack river to the Berar mountains, as from the mouth of the Godavery to the Baglana mountains. The truth is, that no just account of these rivers, any more than of the Burrampooter, had then reached any European geographer. Succeeding inquiries and discoveries have made it certain, that the Godavery is the river that runs under Rajamundry, and falls into the sea between Coringa and Narsapur; and that the Cattack river, rises in the Ruttunpour country. But the recent discovery (to Europeans) of the Bain Gonga, whose course is directly across the supposed course of the Gonga (the name given to this compound river, whose head was the Godavery, and tail the Mahanuddy), clears up at once the ambiguity; if any there could be supposed to remain, after the discussion of the subject in the memoir of the map of 1782. The Godavery has its source about 70 miles to the N E of Bombay; and in the upper part of its course, at least, is esteemed a sacred river by the Hindoos: that is, ablutions performed in its stream, have a religious efficacy superior to those performed in ordinary streams. The Beemah, according to Mr. Orme, is supposed to have similar virtues: nor are sacred rivers

by any means uncommon in other parts of India.* The Godavery, after traversing the Dowlatabad soubah, and the country of Tellingana, from west to east, turns to the south-east; and receiving the Bain Gonga, about 90 miles above the sea, besides many smaller rivers, separates into two principal channels at Rajamundry; and these subdividing again, form all together several tide harbours, for vessels of moderate burden. Ingeram, Coringa, Yanam, Bandarmalanka, and Narsapour, are among the places situated at the mouth of this river; which appears to be the most considerable one, between the Ganges and Cape Comorin. Extensive forests of teek trees border on its banks, within the mountains, and supply ship timber for the use of the ports abovementioned: and the manner of launching the ships in those ports, being very singular, I have subjoined an account of it in a note.† The Godavery was traced about 70 miles above its mouth; the rest of its course is described only from report: save only at the conflux of the Bain river, and in places where different roads cross it; until we arrive at the part where M. Bussy's marches have described it generally, in common with other particulars.

* There are seven rivers particularly celebrated and respected by the Hindoos; and which are collectively distinguished by the name of *Sutnud*, or the Seven Rivers; namely, the Ganges, Jummah, Godavery, Serooty, Nerbulah, Sind, and Cauvery. (Kirkpatrick's MSS.)

† The ship or vessel is built with her keel parallel to the shore; and, as it may happen, from 200 to 300 feet from low water mark. When completed, she is placed on two strong pieces of timber, call'd *dogs* (in the nature of a sledge of enormous dimensions); and on these, a sort of moveable cradle is constructed, to keep the vessel upright. Two long Palmyra trees, as levers of the second kind, are then applied to the ends of the *dogs*, and by means of these powers, they, together with the vessel that rests on them, are gradually pushed forwards over a platform of logs, until they arrive at the lowest pitch of low water: or as far beyond it, as the levers can be used. Tackles are applied to the ends of the levers, to increase the power: the fulcrums, are wreaths of rope, fastened to the logs on which the vessel slides: and are removed forwards as she advances. Two cables from the land side, are fastened to the vessel, to prevent her from sliding too rapidly, and these are gradually let out, as she advances.

It is commonly the work of two days to transport the vessel to the margin of low water. If the tide does not rise high enough to float her from thence (which it seldom does if the vessel be of any considerable burden), part of the cradle is taken away, and the ship left chiefly to the support of the cables till high water, when they are suddenly let go, and the vessel falls on her side; and with the fall, disengages herself from the remains of the cradle, and at the same time plunges into deeper water. A ship of 500 tons has been launched in this manner.

The course of the Bain Gonga (or Bain river), as I have just observed, is quite a new acquisition to geography; and we are indebted to the late Col. Camac for it. This river, which has a course of near 400 miles, was not known to us, even by report, till very lately. It rises near the southern bank of the Nerbuddah, and runs southward through the heart of Berar; and afterwards mixes with the Godavery, within the hills that bound our northern circars. This circumstance confutes at once the idea of the Godavery being a continuation of the Cattack river. I cannot find how far up the Bain Gonga is navigable; but it is mentioned as a *very large* river, in the early part of its course; and is probably equal in bulk to the Godavery, when it joins it.

There yet remains in the map, between the known parts of Berar, Golconda, Orissa, and the circars, a void space of near 300 miles in length, and 250 in breadth; nor is it likely ever to be filled up, unless a very great change takes place in the state of European politics in India: for we appear not to have penetrated beyond the first ridge of mountains, till very lately; when the discovery of the black pepper plant was made, in the districts of Rampa.

Beyond the *great* ridge of mountains (which may be 60 or 70 miles inland) and towards Berar, is a very extensive tract of woody and mountainous country, with which the adjacent countries appear to have but little, if any, communication. We may fairly suppose that to be a country void of the goods in general esteem among mankind, that does not tempt either their avarice, or ambition. Although surrounded by people who are in a high degree of civilization, and who abound in useful manufactures, we are told that the few specimens of these miserable people, who have appeared in the circars, use no covering but a wisp of straw. We know not, with any degree of certainty, how far this wild country extends within the great ridge of mountains, between the parallels of 17° and 20°: but the first civilized people that we hear of beyond them,

are the Berar Mahrattas. I think it probable that it may extend 150 miles, or more. However, a party of Berar Mahrattas found their way through this country, and the Bobilee hills, in 1754 (Orme, Vol. I. page 373), at an opening called Salloregaut, in the Cicacole circar. Our ignorance respecting this tract may well be accounted for, by its lying out of the line of communication between our settlements; and by its never having been the seat of any war, in which the Europeans have taken part. I suspect, however, that the tract in question, is either too desert, or too savage, to be easily or usefully explored.

Between the Godavery and Kistnah rivers, and on the north-east of Hyderabad, was the ancient country of Tellingana (or Tilling), of which Warangole (the Arinkill, of Ferishta) was the capital. The site of this capital is still evident, by means of the old rampart; which is amazingly extensive. A modern fortress is constructed within it; and is in the possession of the Nizam. Col. Peach marched by way of Ellore and Combamet, to this place, during the war of 1767; and the road was surveyed by Lieutenant, now Major Gardner. His horizontal distance from Ellore to Warangole was 134 G. miles: and the bearing W 33 N*. A note accompanying Major Stevens's copy of this route, says, that the latitude of Warangole is $17^{\circ} 57'$: and this bearing and distance accords with it. I am ignorant of the exact relative positions of Warangole and Hyderabad: Montresor's map makes the distance between them 45 G. miles. My construction makes it 47, and the bearing of Warangole from Hyderabad N E by N. Montresor's bearing of Warangole from Ellore, is very faulty; and it is remarkable, that though there are several plans of this road, most of them differ widely, both in bearing and distance. Major Gardner's, I apprehend, may be depended on.

The places round Warangole, are taken from a MS. map of Mr.

* His bearing is corrected by the compass of Col. Pearce's map, from which it differed $2^{\circ} 55'$.

Dalrymple's. Byarem, Culoor, Damapetta, &c. are all from MSS. belonging to the same gentleman.

The road from Hydrabad to Nagpour, was communicated by Mr. John Holland. The distance is stated at 169 coses; which agrees remarkably well with the interval on the map: and, as Nagpour is a fixed position, we may infer, that Hydrabad ought to be rather in $17^{\circ} 19'$ than $17^{\circ} 24'$ (see page 214). The two places bear nearly N and S from each other; and the whole distance, of course, is difference of latitude. A place named Indelavoy, or Endelavoy (Indelvai, in Tavernier, and Thevenot), appears in this route, between the Godavery and Hydrabad: and Thevenot's route from Aurungabad to Hydrabad, falling in there, determines the direction of both roads; and also the positions of Indour, and Sitanagur: the latter being a famous pagoda in that part. Neermull, a city of note, belonging to the Nizam, also rises in this route; and is about 10 G. miles from the north side of the Godavery, and about 132 from Nagpour. Mr. Ewart also collected some routes from Nagpour, Neermull, and Hydrabad; and a route by way of Chanda, appears in Mr. Orme's Historical Fragments of the Mogul Empire. As one of Mr. Ewart's routes gives the position of this Chanda (a considerable city belonging to Nagpour, and about 70 G. miles to the south of it), we are enabled to lay down this road; which was marched over, by M. Bussy.

Another principal branch of the Godavery, is the Manzorah; a considerable river which rises in the country of Amednagur, and after a circuitous course by Beder, joins the main river below Nander.

Many interesting positions arise in the marches of M. Bussy, between Hydrabad and Aurungabad, by the two roads of Beder, and Nander; and no less in the march from Aurungabad to Sanore. Beder is a fortified city, about 80 road miles to the NW of Hydrabad; and was in former times the capital of a considerable kingdom.

The road from Beder to Burhanpour, through Patris and Jaffierabad, is from M. Thevenot. It assists in determining the position of Jaffierabad, a principal town on the N E of Aurungabad. The road from Nander to Nagpour, through Mahur, is partly from M. Bussy, and partly from Mr. Ewart; by whose account Mahur is 78 cosses, but by construction about 87, S W from Nagpour.

The road from Poonah to Beder, is taken from the journal of the late Col. Upton: who returned from his embassy, by the route of Hydrabad, and the circars, to Bengal. His journal has much merit, being very descriptive of the countries and places he passed through; as well as of their respective boundaries: but he was unlucky in estimating his course; and it happens that we have no cross line to correct it by.

The road from Aurungabad to Sanore-Bancapour, is taken from the map of M. Bussy's marches: and Sanore was the extreme point of his campaigns, that way. See Orme, Vol. I. p. 425. I could only take the bearing and distance, as I found them in the map: and it is a great defect, that in so considerable an extent, there should be no observation of latitude; that we know of. By the *data*, Sanore is placed in lat. $15^{\circ} 39'$; lon. $75^{\circ} 44'$; or about 117 G. miles E by N from Goa. There is nothing to check this position, from the Malabar side: not even the number of computed cosses from Goa. However, let the matter stand as it may, with respect to the mathematical exactness of the question; had it not been for these marches of M. Bussy (the only remaining monument to the French nation, of their former short-lived influence and power in the Deccan), the geography of these parts, would have been extremely imperfect: but as they extend through more than four degrees of latitude, and more than five of longitude; they occupy not only the principal part of the Deccan, but by fixing the positions of so many capital places, and intersecting the courses of so many rivers, tend to clear up many other positions.

Visiapour (or more properly Bejapour) is not so well ascertained, as might be wished; although much improved in its position, by means of Capt. Reynolds's survey, from Poonah to Bad-dammy, on the south of the Kistnah river; taken a very few years ago.

The nearest point to Bejapour, that can be regarded as fixed, is Arruck, Arcek, or Areg, as it is differently written by Capt. Reynolds, by Mandesloe, and by Anquetil du Perron. It lies a few miles from the north bank of the Kistnah river; and is supposed to be about 45 G. miles S W, or S W by W from Bejapour: this idea being collected from Mandesloe's route. On the first construction of the map, I had placed Arruck, partly on the authority of Anquetil du Perron, whose route from Goa to Poonah, is very vaguely described* in the first volume of his *Zendavista*; and partly on that of Mandesloe; these two routes, falling into each other at Arruck and Inapour: and on this foundation, together with the reports of the distance from Goa, Carwar, and Dabul; and the latitude (as given in the *Lettres Edif.* Vol. XV.); I had placed Bejapour. The particulars of the distance, &c. are as follow:

Mandesloe, who travelled the roads himself, says, that it is 80 leagues (French, I apprehend) from Dabul, on the coast of Malabar; and 84 from Goa; which may give 142 G. miles from Dabul, and 149 from Goa: making Bejapour in lat. $17^{\circ} 26' 30''$, lon. $75^{\circ} 19'$. P. Du Val, who formed a map of Mandesloe's routes (a copy of which is in the British Museum), and probably had lights, besides what are furnished by the travels, to guide him; makes the distance between Dabul and Bejapour, greater than between Bejapour and Goa: which might possibly be the case, though contrary to what is said in the travels.

Tavernier reckons 85 cosses from Goa to Bejapour (or rather,

* Speaking as a geographer.

perhaps, from Bicholim, the landing place on the continent), or eight days journey: which eight days may give 140 G. miles on a straight line; and agrees with what is said above. Fryer reckons Bejapour ten days journey from Carwar, or about 180 G. miles. Caesar Frederick agrees with Tavernier, in making it eight days journey from Goa.

The *Lettres Edifiantes* make the latitude of Bejapour $17^{\circ} 30'$. I placed it in lat. $17^{\circ} 26' 30''$, lon. $75^{\circ} 19'$; that is, 149 G. miles from Goa; 142 from Dabul; 171 from Carwar; and 203 from Golconda. At the same time, I thought it probable, that it might not be within 20 miles of its true position.

Capt. Reynolds's route passed through Arruck; which he reckoned $110\frac{1}{2}$ G. miles from Poonah, whilst my position gave only 101. He also made it $56\frac{1}{2}$ east of Poonah; my position 43 only. His latitude $16^{\circ} 56' 30''$; mine 17° . Now, as Bejapour is to be placed in reference to Arruck, it is plain that it ought to take a more easterly position than I had given it: and it is now placed accordingly in latitude $17^{\circ} 28'$; longitude $75^{\circ} 27'$: and somewhat more northwardly in respect of Arruck, than it was before.

Bejapour is a considerable city, and was once the capital of a large kingdom of the same name. It is now in the hands of the Poonah Mahrattas.

Whether it be regarded on the score of novelty, or of actual use, as giving us correct ideas of so many interesting positions, between Poonah and the northern frontier of Tippoo's country; Capt. Reynolds's route is certainly one of the most productive in geographical materials, that we have lately seen: and that, not only in the actual line of his progress, but on either side of it: and this is the true spirit of the science, which contemplates not only the objects that are immediately in view, but directs its inquiries to all around the neighbourhood. General geography will flourish only in the hands of such professors.

Amongst other positions, the following are ascertained by Capt. Reynolds's route:

Sattarah, the capital of the Mahratta state, during the time of the rajahs of Sevajee's line. It lies near the eastern foot of the Gauts, and near the most distant source of the river Kistnah.

Merritch (or Merridge), mentioned in page cxxv of the Introduction, as the capital of Purseram Bow, a Mahratta chief. This is situated near the north bank of the Kistnah; eight or nine G. miles to the W N W of Arruck.

Pannella, so much celebrated in the history of Sevajee (see Orme's Historical Fragments of the Mogul Empire); as also Darwar, sometimes written Danwar; which place has been also the subject of history, in our own times; in particular for the siege which it lately sustained against the Mahrattas. It is one of Tipoo's frontier towns, towards the dominions of the Paishwah.

A general idea of the upper part of the course of the Kistnah river is also conveyed by this survey: and Moodul, or Muddul, near it, points out the direction of the route from Goa to *Galgala* on the Kistnah, travelled by a Portuguese gentleman, who visited Aurungzebe's camp at Galgala, during his campaigns in the Deccan, at the latter end of the last century. The MS. account of this route, was amongst the great variety of communications made by my friend Mr. Dalrymple.

Whether the Baddammy of Capt. Reynolds, be the Bandemgur of M. Bussy's route, I know not. The marches of the British detachment, that accompanied the Mahratta army to Darwar, during the last campaign, will probably settle this point, in common with a great many others.

The travels of M. Anquetil du Perron from Goa to Poonah, furnished some useful matter towards filling up a part, that has long remained almost a perfect void, in the maps of India; but a great part of it is now superseded by the survey of Capt. Reynolds. M. Anquetil speaks of eoses and leagues as synonymous

terms; and reckons $40\frac{1}{2}$ of these from Vaddal, at the western foot of the Gauts, and about 12 cosses (or leagues) SE or ESE from Goa, to Areg; and $51\frac{1}{2}$ more from Areg to Poonah. One can hardly tell how to denominate his itinerary measure; which is about two G. miles and a sixth in horizontal measure. On the road from Poonah to Nimderra (in page 212), we have observed the same deviation from the standard of the itinerary measures of the country; for, on that road, his cosses turn out exactly two G. miles each, on a straight line. It should be a rule for every traveller to use, not only the measures, but the denomination of the country he passes through; for then we are likely to possess a better scale, than his judgment can furnish us with. This will be understood to apply to computed distances only. I lament exceedingly that M. Anquetil had not a compass with him, with which he might have taken the bearing of the road between Poonah and Aurungabad; and between Goa and Arruck; for in a quarter where geography is so bare of materials, that every notice of the kind is received with avidity, that gentleman had a fair opportunity of distinguishing himself in this way; as he may be said, in some parts of his route, to have trod a new path.

Naldorouk, Malkar, Sakkar, Kandjoly, and other places in the Deccan, are from Mr. Orme's Historical Fragments; to which publication I owe many obligations, as well on the score of rational amusement, as of genuine information.

Raoconda, a famous diamond mine, is placed in Mr. Montresor's map, about 15 G. miles to the west of Ralicotte, and 12 from the north bank of the Kistnah; but I know not on what authority. Tavernier, who visited Raoconda, gives its distance from Golconda at 17 gos, of four French leagues each. He crossed a river, that formed the common boundary of Golconda and Visiapour, about four gos, or more, before he came to Raoconda: and this river can be no other than the Beemah; which to this day, forms the eastern boundary of Visiapour; and passes about 80

or 82 G. miles to the west of Golconda, crossing the road from it to Ralicotte. If we reckon the 82 miles, 13 gos: that is, forming a scale from the distance between Golconda and the river Beemah, each gos will be 6.3 G. miles in horizontal distance (or nearer three than four French leagues); and Raolconda will be placed about 25 G. miles on the west of the Beemah; or 11, east of Ralicotte.

If we take the *gos* at four French leagues, without regarding the proportion arising from the above calculation, it will bring Raolconda very near the situation assigned it by Montresor. But I have nevertheless adopted the former, thinking it, on the whole, the most consistent.

Cæsar Frederick says, that the mines (Raolconda) are six days journey from Bisnagur: but this will apply equally to either of the above positions.

The general course of the Kistnah river, from the sea to Bezoara, is chiefly taken from Major Stevens's maps, communicated by Mr. Dalrymple. From thence, to Timerycotta is from Montresor, collated with Capt. Davis's sketch of Guntoor, &c. and a French MS. map. From that place, to the conflux of the Toombuddra, it is drawn only from report, and in the form it is usually done, in the maps that include its course. From the mouth of the Toombuddra to Gutigui, or Catigui, its course is drawn in a French copy of M. Bussy's marches; and I have corrected it in two places by a journal, kept by the late General Joseph Smith. Above Gutigui, its course is marked in certain places, by the roads that cross it; particularly those travelled by Reynolds and Mandesloe: but, upon the whole, nothing more than its mere general course is known, except within 70 miles of the sea. General Smith remarks, that the Kistnah was fordable both above and below the conflux of the Beemah river, in the month of March: and that a few miles below the mouth of the Beemah, its bed was 600 yards wide, and exhibited an uncommon appearance, from the number and diversity of the rocks in it.

The Kistnah and Godavery rivers, however remote at their fountains, approach within 80 miles of each other, in the lower parts of their course; and form an extensive tract of country, composed of rich vegetable mould, such as is usually found at the mouths of large rivers. Here we behold, on a smaller scale, the same economy that is observable in the agency of the Nile and Ganges, in forming the DELTAS of Egypt and Bengal; by means of the finer particles of earth, that are swept down by those vast rivers, and their branches, in a course of more than 2000 miles. Those who have been on the spot, and reason from analogy, in this case, will readily suppose that the whole, or the greatest part of the tract, included between Samulcotta and Pettapolly (about 150 miles in length along the sea shore, and from 40 to 50 wide), is in reality a gift of the two rivers, Godavery and Kistnah. The same appearances, indeed, may be observed at the mouths of the Cattack and Tanjore rivers; but the two rivers in question, by draining a much greater extent of country (that is, from the 15th to the 21st degree of latitude), have collected materials for a greater quantity of new land. Within this new formed land, and about midway between the Godavery and Kistnah, the soil forms a hollow space; which in its lowest part is a lake at all seasons; and in all the other parts, an extensive inundation, during the season of the periodical rains; being then a lake of 40 or 50 miles in extent. This is called the Colair lake; and its origin may be referred to the same cause, as that which produces the lakes and morasses of the Egyptian and Bengal deltas: which is, that the deposition of mud by the two rivers (or the two branches of one river), at the time when they overflow, is greatest near the banks: for the farther the inundation flows from the margin of the river, the more of its earthy particles will be deposited in its way; and the less will remain for the distant parts; which therefore cannot be filled up to the level of the ground, nearest the bank of the river: and thus the ground will acquire the form of an inclined plane, from each

river bank towards the interior part of the country; where a hollow space will be left: but it may be expected, that when the rivers have raised their banks, and the adjacent country, to the greatest possible height, which is that of the periodical flood (and the ground can be raised no higher); the subsequent inundations finding their way into the hollow place, from the lower part of the river, will gradually fill up with mud, that part of the lake which lies towards the source of it: and as the new land continues to encroach upon the sea, the lake will travel downwards in the same proportion. For the natural course of things is, that when the new lands that are the furthest removed from the sea, are raised as high as the agency of the waters will admit; that portion of the mud, which cannot be deposited above, is carried lower down to raise other lands; or to lay the foundation of new land, further out: and thus the regular declivity of the channel is preserved. All lands subject to inundations *must* continue to rise; because the water of the inundation deposits, at least, *some portion*, of the earthy particles suspended in it: but there must be a certain point of elevation, beyond which no delta or river bank *can* rise; for each successive point in the course of a river, must be lower than the preceding one. As to the Nile, its banks will admit of being raised, throughout the whole Said, as well as lower Egypt; the cataracts being so much elevated above the lower part of the river: and Egypt also differs in another particular, from India, in that no rain falls there, to wash away the light parts of the soil into the river, before the inundation: whereas, the heavy rains of Bengal, previous to the inundation, must reduce the level of the elevated grounds and contribute partly towards filling up the hollows: and no small proportion of what is deposited in one season, will be carried lower down, or into the sea, in the next. So that the progress of raising the lands must have been more rapid in Egypt, than in any of the moister regions.

It appears to me, that the gentlemen who have lately reasoned so

ingeniously on the increase of the delta of the Nile, have omitted a circumstance of considerable moment, as it respects the length of the periods, required to form given quantities of new land in; or to elevate the old to a certain degree. We never fail to remark, on a survey of the naked summits of mountains, that the rain has, in a course of ages, washed away the earth that covered them; or, in other words, that there is a progressive motion of the finer particles of earth, from the mountains, towards the vallies. Admitting this to be true, and also that a proportion of it is swept away by the torrents: the longer the rivers continue to run, the less quantity of earth they must carry away with them: and therefore, the increase of the deltas, and other alluvions of capital rivers, must have been more rapid in earlier periods of the world's age, than now.

After this long digression, it would be unpardonable in me to omit an account of a plan proposed by my ingenious friend, Mr. John Sullivan: which was, to open a communication at all seasons, between the Colair lake and its parent rivers, with a view to the improvement of the adjacent lands (which form a part of the circars), and of the inland navigation. It appears that an imperfect channel already exists, between the lake and the Godavery river; as well as the traces of an unfinished one, towards the Kistnah; and which this gentleman, with great appearance of probability, imputes to a like design having been formed by the natives, in early times. This scheme, which appears to be practicable on easy terms, has never been adopted: the proposal was made in 1779: and, for the particulars, I shall refer to the tract itself, which also contains much information on other subjects.

To return to the subject of the Memoir. The Beemah river is known to be a principal branch of the Kistnah, coming from the N W, and joining it near Edghir. It rises in the mountains, on the north of Poonah, probably not far from the sources of the Godavery: and passes within 30 miles of the east side of Poonah,

where it is named *Bewrab*, as well as Beemah. General Joseph Smith crossed this river, when accompanying the Nizam from Hyderabad towards Mysore, in 1766; about ten miles above its junction with the Kistnah, where it was fordable.

The Visiapour river is a branch of the Beemah, and is named Mandouah, by Mandesloe.

The mountains named the GAUTS, Gattes, or INDIAN APENNINE, which extend from Cape Comorin to the Tapti, or Surat river; occupy, of course, a part of the tract, whose construction is discussed in this Section: but I shall reserve a general account of the Gauts, for the next Section; which treats of the peninsula in general, and of the Gauts, as included in it. This celebrated ridge does not terminate in a point or promontory, when it approaches the Tapti; but departing from its meridional course, bends eastward, in a wavy line, parallel to the river; and is afterwards lost among the hills, in the neighbourhood of Burhanpour. In its course along the Tapti, it forms several passes, or descents (that is, *Gauts*, according to the original import of the word, which means a landing place), towards that river: whence the country into which the passes descend, was originally named Candeish, or the low country. It would appear, that the ridge abates of its great height, after passing the parallel of Basseen, northward: for Mr. Farmer, in his way from Poonah towards Naderbar, observed that the passes had all a descent northward; forming, as it were, a series of steps, until he landed in Candeish. He was then a hostage with Madajee Sindia; who at that time led the grand Mahratta army into Guzerat, against General Goddard.

The country included generally within this bend of the Gauts, is named Baglana (or Buglaneh). It is exceedingly mountainous, but contains many fertile and pleasant tracts. Few countries have greater advantages, in point of natural strength: and this is increased by no less than nine strong fortresses, situated on the summits of rocks: of which Salheir and Mulheir (the *Saler-Mouler* of

the map) are accounted impregnable, to mere force. According to the arrangement of its boundaries, Rairee and Jeneahgur, the strong-holds of Sevajee, were not included in Baglana: for the latter, which answers to the Juneer of Capt. Reynolds, is to the south of Nafuck Trimbuck; which is itself beyond the southern limits of Baglana. For, according to Abdul Humeed, it extended from the sea coast near Surat, which was its western boundary, to the borders of Dowlatabad (or Aurungabad) eastward; in length 100 common cosses; and in breadth, from Naderbar and Sultampour, on the north, to Nafuck Trimbuck, on the south, 70 cosses. Shah-nawaz, although he agrees with Abdul Humeed, in the length, allows only 50 for the breadth. It certainly is not 70 cosses, and yet much more than 50, in distance between the assigned limits on the north and south: so that there appears an error in both their numbers.

Being encompassed (says Capt. Kirkpatrick) by Guzerat, Dowlatabad, and Candeish, it owed its independence, not to its natural strength, but to the address of its rajahs; who courted the princes of those kingdoms, but without ever waiting personally on any of them. Whenever the conquest of it was attempted by any one of these princes, the other two armed in its defence. This curious fact, which (says he) I take from the emperor Jehanguire, shews that the balance of power was carefully attended to, by these sovereigns; and also denotes the important advantage that either would have gained over the other, by the possession of Baglana. When the surrounding kingdoms successively fell to the Mogul power, the rajah, for the first time, acknowledged a superior, and visited the court of Acbar. But even then, the Moguls contented themselves with a *tribute* only; until the rapid progress of Aurungzebe's conquests and power in the Deccan. Its revenue, previous to the Mogul conquest, was about 80,000*l*.

Shahnawaz confirms the report of Jehanguire, concerning the political conduct of the rajahs of Baglana, towards their powerful

neighbours. The person here quoted, is the Shahnawaz Khan, who makes so conspicuous a figure, as the minister of Salabid Jung, in Mr. Orme's history. I apprehend that it is also the same person, whom Capt. Kirkpatrick quotes on the subject of the boundaries of Cashgar, in page 195.

Some general information respecting the situation of the teek forests, and of the extent of the British conquests in 1780 and 1781, along the western foot of the Gauts, between Balseen and Surat, was obligingly communicated by Mr. Hunter, of the East-India direction, and by Mr. Holmes. The teek forests, from whence the marine yard at Bombay is furnished with that excellent species of ship-timber, lie along the western side of the Gaut mountains, and other contiguous ridges of hills, on the north and north-east of Balseen: the numerous rivulets that descend from them affording water-carriage for the timber. I cannot close this subject, without remarking the unpardonable negligence we are guilty of, in delaying to build teek ships of war, for the service of the Indian seas. They might be freighted home, without the ceremony of regular equipment, as to masts, sails, and furniture; which might be calculated just to answer the purpose of the home passage, at the best season: and crews could be provided in India. The letter subjoined in a note, and which was written with the best intentions, will explain the circumstances of the case.* Teek ships of 40 years old and upwards, are no uncommon objects in

* "Frequent have been the opportunities I have had, of observing how very rapid the decay of ships built of European timber is, in the East Indies; and on the contrary, how durable the ships are that are built of the wood of that country, namely, the TEEK; which may not improperly be styled INDIAN OAK. The number of ships of war that were ruined in those seas, during the late war (1757 to 1762), may be admitted as a proof of the former remark; and the great age of the ships built in India, may serve to prove the latter. What I mean to infer from this, for your lordships' use is, that ships of war under third rates, may be constructed in India; and, with moderate repairs, last for ages: whereas a ship of European construction can remain there but a very few years: to which disadvantage may be added, that of losing, in the mean time, the services of the ships that are sent to relieve the worn-out ones."

"Bengal produces iron and hemp; and the neighbouring forests, pine masts: nothing is wanted to bring all these into use, but a fit opportunity, and proper encouragement."

"August 20, 1778."

the Indian seas: while an European built ship is ruined there, in five years. The ships built at Bombay are the best, both in point of workmanship and materials, of any that are constructed in India: and although fourth rates only, are mentioned in the letter, there is no doubt but that third rates may be constructed; as there is a choice of timber. The Spaniards build capital ships in their foreign settlements. The East-India Company have a teek ship on her fourth voyage at present;* which ship has repeatedly wintered in England: therefore any objection founded on the effects of frost on the teek timber, is done away.

* That is, in 1788, [She is now, 1792, equipping for her *seventh* voyage. The ship alluded to, is the Britannia, Capt. Edward Cumming.]

SECTION V.

The Countries contained in that Part of the PENINSULA, lying on the South of the KISTNAH River.

THIS tract, which in extent is not a fifth part larger than the Bengal provinces; yet, by its political divisions, by the talents and ambition of its princes, and moreover, by their being stimulated by the different European powers, whose mercantile views led them thither; has furnished, of late years, more matter for speculation and history, than all the rest of the Mogul empire put together.* But although it has been the theatre of repeated wars between the Europeans and the natives, as well as between the Europeans themselves; yet so ample a supply of geographical matter has not been supplied, as by the wars and negotiations in the north. The geography of some of the western parts of the peninsula, is as little known to us, as that of the central parts of Hindoostan.

* It is lamentable to a feeling mind, to reflect how large a portion of their miseries the unhappy natives of the Carnatic owe to the English: I mean from the insufficient protection afforded them, at the commencement of the war of 1780. The saying of the old woman to Philip, "BE NO LONGER KING," might well have been applied to the executive government in the Carnatic. Much eloquence has been employed in describing the wretched state of the inhabitants of Bengal; when, in reality, *they* are to be classed among the happiest nations throughout Asia. Poets deal in fiction: but a plain tale of woe will best describe the sufferings of the helpless inhabitants of the Carnatic, during Hyder's invasion. And here I cannot refuse a tribute of applause to the character and abilities of the nobleman, who assumed the government of Madras, at a period when the British interests could hardly be said to have an existence in the Carnatic; Hyder having nearly the entire possession of the whole country. I cannot express my opinion of this nobleman's character, in a more forcible manner, than by regretting that such shining talents, controlled by a disinterested mind, should not be employed for the benefit of the public.

The figure of this tract is a triangle, of which the course of the Kistnah river forms the base, and the coasts of Coromandel and Malabar, the sides. Its extent from the Kistnah to Cape Comorin, which forms the apex of the triangle, is about 600 British miles; and its breadth, in the widest part, is about 550.

The construction of the sea coasts, has been already described in the first Section; and that of the course of the Kistnah river, in the latter part of the fourth.

Madras, or Fort St. George, as has been observed (in page 15), lies in lat. $13^{\circ} 5'$, lon. $80^{\circ} 25'$; and close on the margin of the sea. It is the principal settlement of the British East-India Company, on the east side of the peninsula; and is a fortres of very great strength, including within it a regular, well-built city. But as it was impossible to fortify and garrison, in an effectual manner, a city of such extent as the political and cominercial consequence of Madras, must give birth to; there is a second city, separated from Madras, by the breadth of a proper esplanade only; and although near four miles in circuit, is fortified in such a manner, as to prevent a surprise from the enemy's horse; an evil to which every open town in the Carnatic is subject, from the drynes and evennes of the country. Madras was settled by the English about the year 1640; and was hardly defensible, until the destruction of Fort St. David, in 1758, pointed out the necessity of making it so. It is now, perhaps, one of the best fortresses in the posselion of the British nation: and although not of so regular a design as Fort William, in Bengal, yet from the greater facility of relieving it by sea, and the natural advantages of ground, which leaves the enemy less choice in the manner of conducting his attacks; it may on the whole, be deemed at least equal to it.

Madras, in common with all the other European settlements on this coast, has no port for shipping; the coast forming nearly a straight line: and it is also incommoded with a high and dangerous

*surf** or wave, that breaks upon it; and induces the necessity of using the boats of the country, to land in. These are of a singular construction, being formed without ribs, or keel; with flat bottoms, and having their planks sewed together; iron being totally excluded throughout the whole fabric. By this construction, they are rendered flexible enough to elude the effects of the violent shocks which they receive, by the dashing of the waves, or surf, on the beach: and which either oversets, or breaks to pieces, a boat of European construction. No port for large vessels occurs between Trinkamaly and the Ganges: that is, in an extent of 15 degrees: so that the comparative proximity of the former, to Madras and Pondicherry, renders it a capital object, both to the English and French.

The Company's lands (or Jaghire†) extend from Madras to the Pullicate lake, northward; and to Alemparvē, southwards: and westward, beyond Conjeveram: that is, about 108 B. miles along shore, and 47 inland; in the widest part. This whole tract hath had a regular survey: and Mr. Pringle, who surveyed the marches of the army under Sir Eyre Coote, during the war of 1780, has ascertained some interesting geographical positions, beyond it; and by this means extended very considerably, the dimensions of what may be called the *surveyed tract*: so that we are enabled, with a little adventitious help, to fill up, with tolerable accuracy, all the country between the parallel of Pullicate, northward, and Cuddalore, southward; bounded on the west, or inland side, by a line drawn from Cuddalore through Arnee, Velore, and Chittoor; and eastward by the sea. The whole of this tract is a triangular space of

* The reader will find in my friend Mr. Marsden's very excellent history of Sumatra, an account of the *Suxxi*: a phenomenon which I do not recollect ever to have been discussed in a philosophical manner, in any former treatise. The account will be found in p. 28, to 33.

† The term Jaghire means generally, a grant of land from a sovereign to a subject, revocable at pleasure; but generally for a life-rent. The Jaghire in question, is, I believe, understood to be held in perpetuity. It contains about 2440 square miles; and its revenue is reckoned at about 150,000l. per annum.

106 G. miles in length, by 70 wide. By means also of Mr. Pringle's bearings and measured routes, the positions of Portonovo, Sautgud, and Amboor, are obtained; which last may be considered as the most westerly point determined with accuracy, any where to the north of Tritchinopoly; and Amboor is only one-fourth of the whole distance across the peninsula. I cannot find that the road to Colar was measured, during the campaign of 1767.

Arcot is found to be nearer to Madras than was before supposed. I have fixed it by a series of triangles, by means of Wandiwash, Narnaveram, and Sholingur hills; and a base, furnished by the Jaghire map; at 56,6 G. miles, in horizontal distance, from Madras; and about 13° 30' south of its parallel; whence, its latitude will be 12° 51' 30", lon. 79° 28' 15". I do not know that its observed latitude is recorded any where. Mr. Pringle's map makes its distance from Madras 57,9; and M. D'Anville 58,2 in his MS. of positions: and another French MS. map, 59,1.

Arcot is reckoned the capital of the Carnatic; and must be a place of great antiquity, by its being taken notice of by Ptolemy, as the capital of the *Soræ*; or *Sora-mandalum*: from whence corruptly Choro-mandel. It is a pretty large city, and its citadel is esteemed a place of some strength, for an Indian fortress. The defence which it made under CLIVE, in 1751, established the military fame of that illustrious nobleman; whose foibles exposed him to the attacks of enemies, who were better qualified to observe his defects, than to imitate him in the higher parts of his character: to which posterity will do ample justice, when it is placed beyond the reach of the envy of cotemporaries: and when his foibles will be as little remembered, as the malice of his enemies.

The position of Velore, is from Mr. Pringle's distance, corrected by the bearing of Sholingur hill. In his map of Coote's campaigns, he has given too much distance between Arcot and Velore; for it is 17 B. miles in the map, and only 15 by the road, in the tables. Also, between Conjeveram and Arcot, the road distance exceeds the

horizontal distance, by three-fourths of a mile only, in $26\frac{1}{2}$ miles. These, I apprehend, are mistakes, occasioned by haste.

Velore is a post of great importance, commanding the great road leading into the Carnatic, from the valley of Vaniambaddy; and the directest route from the Mysore country. It consists of three strong forts, on as many hills; and is justly deemed impregnable to an Indian army. It is said to have been originally fortified by the Mahrattas, more than 200 years ago. Among other acts of generalship exhibited by Sir Eyre Coote, during the late war, the relief of this place, in the face of Hyder's whole army, may be reckoned a capital one. It is about 90 miles to the westward of Madras.

Paliconda, had its bearing taken from Velore, and the distance between them, was measured. Amboor is determined by the distance from Paliconda, and the bearing of Coulasgur; which latter is determined by bearings from Velore and Arcot. The distances are obtained by means of Mr. Pringle's table of roads, with allowance for winding: Lastly, Sautgud is placed by angles taken at Amboor and Velore.

These, together with Col. Pearse's line, along the eastern coast of the peninsula, and those before taken notice of in the southern provinces (in Section I.) are all the measured lines that occur in these parts: together with one, and only one, observation of latitude; that is, at Chinna-Balabaram, about the middle between the two seas. This being the case, it will follow, that the various materials of which the geography of the tract in question is composed, can be no otherwise arranged, than by establishing as *primary stations*, such places as we have the best *data* for; and which have the greatest number of positions dependent on them: and this being done, to adapt the matter to the respective intervals, between these primary stations; which intervals must of course determine the scales and bearing lines of the several MS. maps, of which the materials are composed.

I shall attempt only to give an account of the manner of determining the principal of these stations, or points of connection; and that for the use of future geographers: to describe the whole, would lead me into unnecessary prolixity. The primary points which it became necessary to describe, in the account of the sea coast, were chiefly from actual measurement; as Tritchinopoly, Tanjore, Madura, Palicaudcherry: and I may now add, Coimbatore and Carroor: which are placed by measurement also. Arcot and Amboor, I have just mentioned; and Poliput and Chittoor, are the only remaining ones, that are established by survey.

Of those that remain to be determined, by tiresome discussion, and comparison; and in some cases by mere judgment, founded perhaps, on doubtful testimony; are Bangalore, Trinomalee, Darmempoury, Dalmacherry, Gooty, Calastri, Sami-Ilsuram, Innaconda, Combam, Adoni, and Timerycotta. And of those furnished by Col. Pearse's march, are Nellore, Ongole, and Siecacollum.

Bangalore, as the first mentioned, is also the most important; as being in the centre of the peninsula, and having routes passing through it, in every direction. It is in itself, a place of great political importance, being a fortress of strength; and from situation, the bulwark of the Mysore country, towards Arcot. A variety of MS. maps of the country lying on the west of the Carnatic, and between it, and Seringapatam, have appeared: most of them, I believe, the offspring of the war of 1767-8, with Hyder Ally. One of a much later date, communicated by Mr. John Sulivan, contains the whole peninsula, south of the parallel of 15°; and is particularly valuable, on account of its having many routes and situations in Mysore, and Bednore; as well as in Tanjore and Madura. By its comprehensive nature, it furnishes an opportunity of proportioning the respective distances between Amboor, Bangalore, Seringapatam, Mangalore, and Bednore; as these places all appear in the same map, together with the routes from one to the other. It would require whole sheets to give an analysis of this, and the rest of the MSS. which

have been consulted on this subject; and therefore, I shall only state generally, that by the mean of the distance from Amboor to Bangalore, in four maps, it comes out to be 73,6 G. miles; (the variation among them, was six miles) and its parallel, according to the same method of proceeding, was $4' 10''$ south of Madras, or $13^{\circ} 0' 50''$. To this may be added, that Chinna-Balabaram, is by the mean of the same four maps, $23' 40''$ to the north of the parallel of Bangalore: and the latitude of the former, which is fortunately preserved in the *Lettres Edifiantes*, being $13^{\circ} 23'$, confirms the general accuracy of the former result: this being only $1' 10''$ different from it; or $12^{\circ} 59' 20''$. Lastly, the interval on Mr. Sullivan's map, between Bangalore and Bednore, is 176 G. miles; and in mine, when Bangalore is placed, as above (73,6 from Amboor; and in lat. $13^{\circ} 17' 25''$). And again, the distance between Bangalore and Mangalore in Mr. Sullivan's map, is 176,5; and in mine, $169\frac{1}{4}$: that is, $7\frac{1}{4}$ different in one case, and $8\frac{1}{2}$ in the other. And this difference is to be accounted for, by our giving a different degree of width to the peninsula: Mr. Sullivan's map making it $15' 15''$ wider than mine does, in the parallel we are speaking of. I have placed Bangalore in lat. 13° , and lon. $77^{\circ} 37' 10''$, according to the above *data*: and this capital point, or *primary station*, being fixed with so much success, both in latitude and longitude, gives some degree of confidence to all the positions round it: for almost every position between Col. Kelly's line on the south, and the Toombuddra river on the north; has, in its construction, a reference to Bangalore. It is the common point of union, in the centre of the peninsula, as Coimbettore is in the S W; and Tritchinnopoly in the S E.

Before I proceed to the detail of the remaining primary stations, in the peninsula, I shall observe at once, that all the roads and positions of principal places in the Mysore and Bednore countries, on the west of Bangalore; and between Roydroog and the parallel of Tellicherry; were furnished by the said map of Mr. Sullivan's: and

of which, I believe, there is no other copy in Europe. Chittel-droog, Shevagunga, Bankypour, Chennyroypatam, Ananpour, and many others, are quite new; and Sera, Sirripy, Roydroog, Rettin-gery, and Chenapatam, appear much more consistent in their positions, than heretofore: and although we cannot expect that either the positive, or relative distances, should be perfectly exact, yet I have every reason to think that they are not far from the truth; and that at all events, the present map affords the best materials that can be procured in this country.

Seringapatam is placed nearly in the position it occupies in Mr. Sulivan's map, in respect both to Bangalore and Mangalore. Its parallel is very uncertain, as there is no good line of distance, to check it, either from the north, or south. Mr. Sulivan's map places it 99 G. miles to the northward of Coimbettore; and Mr. Montresor's 87 $\frac{1}{4}$. As I have adhered more to the account of its relative position, in respect of Bangalore; it stands in the map, only 91 from Coimbettore. Besides, a MS. itinerary gives its distance from Sera, at 3 days journey, or 54 G. miles horizontal distance; which is perfectly consistent with the 91 miles from Coimbettore. It is placed in lat. $12^{\circ} 31' 45''$, lon. $76^{\circ} 46' 45''$.

Sir George Staunton's journey across the peninsula, from Madras to Mangalore, in 1783, as one of the commissioners for negotiating a treaty of peace with Tippoo Sultan, furnished a list of stages, and the estimated bearings and distances between them, the whole way. These, Sir George most obligingly communicated to me, together with his miscellaneous observations and reflections as he went along; and which, being written on the spot, and dispatched as opportunities offered, may be allowed to exhibit a faithful pic-

* Other accounts are as follow: a large map, which I consider as the first that was constructed from the materials, collected during the war of 1767-8; and which may be styled the parent of most of the others, that appear on different scales; gives 99 $\frac{1}{2}$ G. miles, west from Kistnagheri; and 2 north of its parallel. This would place Seringapatam 6 west of its position, in the new map. Montresor's map, gives 56 G. miles from Bangalore, and Mr. Sulivan's, 5 $\frac{1}{2}$. The first goes 9 $\frac{1}{2}$ beyond it; the other only 2.

ture of the mind that dictated them: and they afford a proof that a long journey, in which many things occurred that usually excite disgust, disappointment, and chagrin (not to mention fatigues and want of comforts); may be performed, not only without disturbing the tranquillity of the traveller; but in such a state of mind, as to leave him a sufficient portion of good humour, to enable him to amuse others.

The commissioners were conducted by a very circuitous route, as well as impeded in their journey: for after proceeding on the great road from Anicul towards Seringapatam, in a WSW direction, to Malavilly, within about 12 miles of Seringapatam; they were carried to the N, and NW, so as to leave the latter place, at least 25 miles to the southward of them. As far as these estimated bearings and distances enable me to judge, the positions of Anicul and Seringapatam, in the map, are too far to the west, by several miles, in respect of Caveripatam; the last point established in this route, with any degree of certainty. But the route is unfortunately, too crooked, to admit of its being applied as a corrective, in small errors of distance.

Seringapatam is the capital of Mysore, the dominions of Tippoo Sultan; and it is situated in an island of the Cauvery river, about 290 or 300 miles from Madras. It is very strong both by situation and art, and is in a flourishing state. Mysore, a town and fortified post, and as I understand, the ancient capital; lies about 6 or 8 miles to the southward of Seringapatam. Mr. William Townsend, of the East-India Company's civil service, who travelled from Onore to Bednore, and Seringapatam, was 11 days in travelling between the two latter places; which, however, cannot be more than 180 or 190 miles asunder. He represents the whole country he travelled through, as being open and fruitful: nor did he meet with any mountains between the Gauts and Seringapatam.

Darempoury, Caveripatam, Kistnagheri, and Changamah, are obtained by means of a map of the valley of Vaniambaddy (or the

Barra-maul*) which map includes in general all the fortresses contained within the tract usually known by that name. This map is in Mr. Dalrymple's collection, and has much the appearance of general accuracy; the number of forts placed on rocky eminences, in and about it, affording an easy means of determining the relative positions, by triangles. The contents of this map are joined on to Amboor, a *primary station*; and I made no alteration whatever, in its scale or compass. Darempoury, the extreme point in this map, to the S W, being thus obtained, stands more southwardly in respect of Arcot, than most other maps represent it: that is, the interval between Darempoury and Carroor, is less than is commonly reckoned; and that between Darempoury and Colar, less.

Cudapanattam and Vaniambaddy, were *set* from Amboor rock, and their distances taken from the MS. maps. The roads and places between Cudapanattam and Bangalore; as well as those between this last place and Condour; and also between Bangalore and Darempoury; are taken from the 4 MS. maps, from whence I have inferred the position of Bangalore: and I consider the places within this tract, to be ascertained with much more precision, than those on the south of Darempoury; and between it and Carroor, and Coimbettore: it being a more confined space, and also much oftener traversed, during the war of 1767. But to recount the particulars, would be both tedious, and useless: as the account would contain nothing more than a comparison of bearings and distances, and the mode of correcting, and working them up, into their present form: the labour of which, although compressed within the compass of a few inches, would scarcely be conceived, or believed. Although most, or all, of the roads that appear in the map, between Darempoury, Attore, Carroor and Coimbettore, have been

* The name Barra-mahal, or Barra-maul, *anglice* the *twelve places*, was given it because it contained 12 fortresses of some note (*viz.*, Kirtnagheri, Jegadiv, Candly, Congvonda, Vaniambaddy, Mahrauzegur, Cockingur, Cooturagur, Bazingur, Tripatore, Tadcoll, and Gigangury).

marched over, either by British armies, or their detachments, at different times; yet seldom having a surveyor with them, or by the want of instruments, or leisure, or both; little has been done for geography, more than barely informing us that such roads and places exist. So that the whole country beyond the first ridge of hills from Arcot, and south of the Barra-maul, can be but vaguely described: no one point, as I before observed, having been mathematically determined, on the north of Carroor and Coimbettore; and was it not for the observation of latitude at Chenna-Balabaram, the position of Bangalore, and all the places dependent on it, would be involved in uncertainty.

The road from Seringapatam to Calicut, is from Col. Humberstone's report; and that from Calicut to Damicotta, is from Jeffries's old map. Of that from Seringapatam to Coimbettore, I have seen several copies: among which there are variations both in the scales, and in the names. Col. Wood went from the Barra-maul to Damicotta, Sattimungulum, and Coimbettore, in the course of his campaign in 1767: but I know not on what authority the road from Damicotta to Mysoré, is described.

The determination of the positions in that part of the southern Carnatic, beyond the extent of Mr. Pringle's measured lines, was what interested me particularly: as from its vicinity to a principal settlement, and the scene of much warfare, it may be expected to be a subject of public curiosity. But even here, any more than on the farther side of the mountains, accuracy was not to be attained: for no position was determined mathematically, in the line between Tritchinopoly and Velore: nor even a single line measured from the sea to the hills, to determine the breadth of the Carnatic: nor even a series of triangles, although such a succession of tempting marks occur, throughout this whole space. The only particular that presented itself, in the shape of actual measurement, was Mr. Pringle's route from Tritchinopoly to Velore; but this was without bearings, save from the top of Tiagar hill, about midway

between and which, from the greatness of the distance, could take in only a part of the line; that is, from Volconda to Trinomaly.

Changamah, as has been said before, is placed by the map of the Barra-maul, from the west: and as Trinomaly in the Carnatic, is not only very near it, but also an eligible *primary station*, it appeared, that if there was any tolerable authority for Trinomaly, the operation of fixing it, would at the same time verify Changamah, in respect to the eastern coast: which, considering the slender foundation on which it rested, appeared necessary.

Trinomaly hill, which is visible more than 40 G. miles, was found by trigonometrical process (that is, by an angle of intersection of 20 degrees, from the hills of Wandiwash and Carumpaucum) to be 40 G. miles from the former, in the direction of W 28° S. I should not have been entirely satisfied with this result, had not the position thus pointed out, agreed nearly with the apparent situation of Trinomaly, in respect of Changamah. This is indeed given by Mr. Sullivan's map, at E 10 N, 13 G. miles; while the bearing of Collispauk from Changamah is NE 20 $\frac{1}{2}$; and that of Trinomaly from Collispauk, S 7 W, 12,6 G. miles. But, as Mr. Pringle measured that side of the triangle between Trinomaly and Collispauk, and found it only 11 $\frac{1}{2}$ G. miles (or 15 B. miles in *road distance*), the side between Changamah and Trinomaly ought to be only 10 $\frac{1}{2}$: and this I have adopted, with a small correction; Mr. Pringle's bearing being S 12 W, instead of S 7 W, as in Mr. Sullivan's map. Sir George Staunton, who travelled along that side of the triangle, between Collispauk and Changamah, estimates the road distance at 19 B. miles; which by this construction, ought to be 23 at least.

Trinomaly, thus adjusted, is 52 G. miles, on a bearing of about W NW, from Pondicherry (the nearest point on the coast). M. D'Anville thought it no more than 48; and a French MS. map, which contains the southern Carnatic, and which has afforded me much

assistance, allows only 43 G. miles: but the more modern maps, come nearer to my idea; Wersebe reckoning the distance 55, and Mr. Sulivan's map about 50. This station determines the breadth of the southern Carnatic; and also all the positions between Tritchinopoly and Velore. It will follow, also, that Tiagar, from whence the bearings of Volconda and Trinomaly were taken; as well as Volconda itself; must have an immediate dependence on Trinomaly. The position of Volconda, in respect of Tritchinopoly, would have been a desirable thing, in order to find how it agreed with the position deduced from Trinomaly; but this I could get no good authority for: and Mr. Pringle's bearing ought to have more weight than mere opinions. I have given the different accounts in a note, but without admitting them as authority.* M. D'Anville's, however, agrees with mine. Baron Wersebe's route, obligingly communicated by the Hon. Col. Cathcart (his Majesty's Quarter-master General in India), did not appear until the map was engraved. If Wersebe is right, I must have mistaken the position of Volconda; and placed it 7 miles S E by E of its true position. But Mr. Dalrymple, also, took the angles on Tiagar hill, and made the angle of Trinomalee and Volconda, the same as Mr. Pringle did, to three minutes of a degree.

Gingee is placed 30, and $32\frac{1}{2}$ G. miles from Pondicherry in two French MS. maps; and $36\frac{1}{2}$ in Wersebe's: one might expect that the French knew its position well. I have placed it 33 from Pondicherry; and 29 from Trinomaly.

The rest of the positions in the south Carnatic, as well as the courses of the rivers, and direction of the first ridge of hills, are taken chiefly from the three MS. maps beforementioned (viz.) D'Anville's, the old French MS. map; and Wersebe's; and some

* Bearing of Volconda from Tritchinopoly, by D'Anville,	N 37°	E.
By the other French MS. map	N 36	30 E.
By Wersebe	N 25	15 E.
By Montresor	N 28	45 E.
It stands in the map	N 37	E.

few particulars are from an engraved French map of 1771; whose principal merit is confined to the southern part of the Carnatic.

Carnatic-Gur, and Doby-Gur, two fortresses of note, in the ridge of hills on the west of Arnee, have never been taken notice of in any former printed map. The latter is determined, as to distance from Velore, by a measured route of Mr. Pringle's: and the former had its bearing taken at Velore, and is known to bear about N by W, three miles distant from the latter: of course, two sides and an angle are given; and the two places mutually assist in determining each other's position.

The Coleroone and Cauvery rivers, with their branches, below Caroor, are taken from the maps of Wersebe and Kelly; collated with the old French map. Wersebe's map of Tanjore, contains more particulars than any other that I have seen; especially in the northern part. And for the southern parts, I had some assistance from the map of Mr. Sulivan.

More particulars will be found in the Marawar and Madura countries, in this map, than in any former one that has been published. After the great roads specified in the discussion of Kelly's map, &c. most of the new matter is from Mr. Dalrymple's collection; and the rest from Wersebe and Sulivan. The almost incredible number of forts and fortresses of various kinds in the Carnatic, occasion a greater number of interesting positions within the same space, than in most other countries. Villages, and even towns, in open countries, are but of a day, compared with fortresses; especially when they derive any portion of strength from their situation: a very common case here. Public monuments, too, the unequivocal mark of civilization and opulence, are more common here, than in the northern parts of India.

Madura and Tinevelly are chiefly from Sir J. Call's old map, with many additions from Kelly and Wersebe. The valley of Ootam-paliam, inclosed between the branches of the Gauts, is a very recent acquisition to geography. Nor is this the only new matter

afforded us by Col. Fullarton's march (during the late war) into the southern provinces; the geography of which now wears an entire new face. The intention of this expedition was, to open a communication between the two coasts of Coromandel and Malabar; and at the same time to deprive Hyder Ally of the use of the valuable province of Coimbettore: and, if necessary, to open a ready way into that of Mysore. We learn from him, what will appear a new fact to most readers, that of there being a break in the continuity of the ridge of mountains named the *Gauts*, opposite to Paniany. Governor Hornby, it seems, was apprized of this circumstance; and probably it was formerly known in Europe, though now forgotten. This *break* is about 16 miles wide, and appears to border on what D'Anville calls *Annamally*, or the *elephant mountains*, and is occupied chiefly by a forest of timber trees, which has the fort of Annamally on the east, and Palicaudcherry on the west. The valley or opening extends 14 or 15 miles between the termination of the northern Gauts, and the commencement of the southern ones; before it opens finally into the low country on the Malabar coast. It is well known that ships which navigate the Malabar coast, during the N E monsoon, commonly experience a stronger gale in the neighbourhood of Paniany, than elsewhere; and I am of opinion that this opening in the Gauts, is a very sufficient cause for such an effect. I have been told also, that the lower part of the Coimbettore country, partakes of the rainy, or SW monsoon of the Malabar coast; which may certainly be referred to the same cause.

The river of Paniany takes its course from the Coimbettore country, through this opening; and is said to be navigable in the rainy season, for small boats, to the foot of the Gauts; which is a circumstance worthy of being known, and which I was ignorant of, until I read the Life of Hyder Ally, published in France, in 1784. This circumstance, together with the inundated state of the country at that season, may serve to show, that the country

west of the Gauts, has no great declivity, in a course of near 60 miles.

The Paniany river, as well as that of Daraporum, has its source from an elevated plain, of about 60 miles in extent; and which stretches itself across the eastern mouth of the gap or valley, before spoken of. This plain rises suddenly from the level of the surrounding country, like a vast terrace; and the forest bounds it on the west. There are examples of the same kind of elevated plains in Bengal; and in the Bundela country, south of the Ganges, near Soohagee Gaut.

The common boundaries of the Carnatic, and of Mysore, are tolerably well ascertained in the southern provinces;* and an approximation towards the truth, is made, in those of the Marawars and Tanjore; but on the north of the Cauvery, I believe the boundaries are very ill defined, even by the governing powers themselves; except in particular places.

On the west of the Gauts, and between those mountains and the lakes of Cochin and Travancore, there is nothing new. The country is chiefly one vast forest: and of course, scarcely inhabited, or known, as to particulars.

Terriore, or Tarriore, a fort possessed by a rajah of some note, on the north side of the Cauvery, and at the foot of the first ridge of hills; has its position from the authority of the MS. maps abovementioned. They differ, in giving its distance from Tritchinnopoly, from $22\frac{1}{2}$ to $25\frac{1}{4}$ G. miles: and from Ootatore, from 16 to $17\frac{1}{4}$.

Attore, a considerable post on the west of Tiagar, I found some difficulty in placing, from the discordancy of the different accounts: and indeed the whole tract beyond the first ridge of mountains beyond the Carnatic, is very vaguely described, both in point of

* Meaning those on the south of the Cauvery river. And the countries between the Cauvery and Guntoor, are here named *The Carnatic*, in a particular sense; and this is again subdivided into N and S, as the parts respect Madras.

particulars, and of geometrical exactness. With respect to Attore, which is the centre of several roads described in the map, I have placed it chiefly on the authority of Mr. Sulivan's map; as it corresponds with the bearing of the mouth of the pass from Tiagar; as reported by Mr. Pringle. That bearing was W $13^{\circ} 11'$ S.; and in Mr. Sulivan's map, it stands N 38° W, distant $28\frac{1}{2}$ G. miles from Volconda. It is placed in the map N 39° W, $28\frac{1}{2}$ miles; $32\frac{1}{2}$ from Darempoury; and 34 from Salem, or Sailum.*

A route of Baron Wersebe's, from Tritchinopoly to Tiagar; communicated by my friend Col. Cathcart, came to hand after the map was engraved; and therefore too late to enable me to correct Ootatore; whose position, by that gentleman's account, is more northwardly, in respect of Tritchinopoly, than I have placed it. The route in question was not measured; but it being very straight, there could be no difficulty in ascertaining the true bearing of it.

The principal settlements and commercial factories of the Europeans, in the peninsula, are all situated along the coast of the south Carnatic; or, as it is usually termed, the coast of Coromandel. Madras we have already spoken of: the English possess also the fortress and city of Negapatam, situated on the coast of Tanjore; taken from the Dutch in the late war. It is a neat city, and a place of considerable trade: but more valuable from its local position.

Pondicherry is the principal settlement of the French in the Indian seas. Its general position has been discussed in page 18; and with respect to Madras, it lies to the south, distant 100 road miles; and at the mouth of the Gingee river. It was first settled by the French in 1674; and was then included in the rajahship of Gingee, subject to the King of Narsinga. Previous to the war of 1756,

*As it may assist some other person, who may undertake to correct this geography, I have inserted the following particulars, collected from different authorities: Mr. Sulivan's map places Attore, S $40^{\circ} 30'$ W, 31 G. miles from Darempoury; and E $10^{\circ} 20'$ N, $29\frac{1}{2}$ from Salem. D'Anville's map of positions, N $37^{\circ} 40'$ W, $24\frac{1}{2}$ from Volconda. And Montrésor, E $42^{\circ} 50'$ S, 18 from Darempoury.

Pondicherry was, perhaps, the finest city in India. It extended along the sea coast about a mile and a quarter, and was about three quarters of a mile in breadth: was well built, and contained many public buildings; and a citadel, then the best of its kind in India, but of too contracted dimensions. This fine city was first taken by the English, in 1761; and was immediately razed to the ground, in retaliation of M. Lally's conduct towards the fortifications and buildings of Fort St. David, in 1758. This proceeding of M. Lally, was agreeable to a system adopted by the French East-India Company in Europe: and which had its foundation in commercial jealousy.* However, the consequent destruction of the French settlement of Chandernagore, might have glutted our revenge for the loss of Fort St. David; and we should have been content with dismantling Pondicherry. The French have also factories at Cuddalore, and at Carrical: the former within sight of Pondicherry: the latter in the Tanjore country. Cuddalore is naturally a very strong situation: and would have been the most commodious, perhaps, for the chief British settlement; since the security of Tanjore, and the conveniency of supplies from it, must ever be a capital object. Besides, as the S W monsoon is the season of naval warfare, Pondicherry has the advantage of being to windward of Madras; and the French, at the same instant, accomplish the double purpose of keeping to windward, and of protecting their capital settlement: and receive assistance from it in return. The British fleet, in order to watch the enemy, retires 100 miles from their principal settlement; and receives only a precarious assistance from the shore: that is, from Cuddalore, or its neighbourhood, their usual station.

The Dutch possess on this coast the towns of Pullicate, Sadras, and Portonovo; each of which has a small fort to protect it, against

* If we are to judge of the degree of turpitude of a crime, by the mode of punishing it, rivalship in commerce should be one of the most heinous crimes in nature: for nothing less than the most flagitious, and universal criminality, can authorize the destruction of the habitations, and the consequent dispersion of the inhabitants, of a great city. The fate of Rome might be involved in the existence of Carthage: but the question here, was only which of the two parties should purchase calicoes at the cheapest rate, or sell them at the dearest.

the consequences of any desultory irruption, or the quarrels of petty chiefs: but which could make no stand against a regular army. The Danes have also a settlement of the same kind, at Tranquebar, within the confines of Tanjore.

For an account of the cities of Trichinopoly, Tanjore, Madura, and the stupendous pagodas of Seringham, &c. I shall refer the reader to Mr. Orme's elegant and faithful History of the Military Transactions of the British Nation in Hindoostan.

When we turn to the north of the parallel of Madras, the subject appears to be more barren of matter, of every kind, than in the south: and among the little that does appear, there is a still smaller proportion of actual survey. The jaghire map, and the marches surveyed by Mr. Pringle, do not extend far to the north of Madras. There is indeed, Col. Pearse's line of march, that way: but it furnishes only an outline; for it never deviates far from the coast. The matter before us, is confined chiefly to the eastern half of the peninsula; and the farther we recede from the coast, the more scanty are the materials, and the less to be depended on.

The authorities for the course of the Kistnah river, which bounds on the north, the tract which is the subject of this Section, will be found at the end of the fourth Section: and I shall now proceed to give an account of the authorities on which the remaining primary stations, between the parallel of Madras, and the Kistnah, are founded.

On Dalmacherry and Gooty, depend the whole course of the Pennar river, from its source to Cuddapa; together with all its branches, and the different positions near them; such as Cuddapa, Tripetty, Chandeghere (or Kandeghere), and Calastri.

There is a diversity of opinion concerning the position of Dalmacherry, as there must ever be, when the distance and bearing of a place, have not been mathematically ascertained. A curious MS. communicated by my friend General Caillaud, entitled, "*An Account of the Passes between the parallels of Udegbery and Sautgud,*"

and from which I have received great assistance, has the distances in computed miles from one pass to another, and oftentimes from some distant capital place also; but without bearings. This MS. gives the distance of Dalmacherry, at 75 British miles of road distance, or about 56 G. miles of horizontal distance, from Arcot. Montresor's map gives 64, and Mr. Sulivan's $61\frac{1}{2}$. Montresor, also, places it $47\frac{1}{2}$, in a N N E direction from Cudapanattum; and Mr. Sulivan 47. I have placed it $56\frac{1}{2}$ from Arcot, in a N N W direction; which makes the interval between it, and Cudapanattum, $46\frac{1}{2}$: and its latitude is $13^{\circ} 43' 30''$. There are three important passes leading from this place, into the Mysore and Cuddapah countries: and here it was that Doast Ally, the Nabob of Arcot, was surprised and defeated by the Mahrattas, in 1740.

Gooty or Gutti, is a strong fortress on a hill, beyond the river Pennar,* and towards Adoni; and formerly the seat of government of Morari Row, a Mahratta prince. This place, together with the course of the Pennar, is found in Montresor's map; which contains more particulars in this part of it, than any other map I have seen. But a difficulty arose in adjusting the position of Gooty, in my map; because the distance between Dalmacherry and Chinna-Balabaram is much less in *it* (13 miles) than in Montresor's; and Gooty appears to be ascertained by two lines, drawn from those places: so that either the bearings, or the distances, must be rejected. I thought it the safest way to adhere to the distances: as it is probable they might have more weight, than the bearings had, with Mr. Montresor, who adjusted this circuitous route, between Arcot and the head of the Pennar. His scale gives 112.2 G. miles, on a bearing of N 3 E, from Chinna-Balabaram to Gooty; and 118.5, N 43° 45' W, from Dalmacherry to the same place. The intersection of the bearings (which make an angle of about 40°) would place Gooty in lat. $14^{\circ} 58'$: and that of the distances, in

* Or Pen-aur. I believe the term *aur*, for river, which prevails generally throughout the Carnatic, is not found any further to the north than Nellore.

$15^{\circ} 15'$; and nearly in the meridian of Chinna-Balabaram. I have preferred the latter, for the reason abovementioned.

The inferior branches of the Pennar are taken from D'Anville's map of 1752: but Tadimeri, Anantpour, &c. are from the Universal History. Gandicotta, on the south bank of the Pennar, is remarkable both as a strong fortress, and for having a diamond mine near it: a particular account of it, will be found in Tavernier. Penuconda, a considerable place near the Pennar river, is said to be 20 leagues N E of Sirpy, and 20 N N W of Chinna-Balabaram. This account, also, is in the Modern Universal History. Caesar Frederick mentions it as the retreat of the King of Bisnagur (or Narsinga), 8 days journey from Bisnagur.

The Pennar river, after springing from the neighbourhood of the Balabarams, runs directly northward, until it approaches Gooty; and then takes a S E course by Gandicotta and Cuddapah: after which it changes to the east, and reaches the sea at Gangapatnam, after passing the fort of Nellore. The MS. account of the passes, remarks that this river is 300 yards wide at Sami-Isuram, about 70 miles from the sea; although it is confined in its course, by hills, on both sides.

It has been observed in the first Section, that Capt. Ritchie's chart of the coast of Coromandel, made the point at the Pennar river, project too far out. I find by a reference to 6 different MS. and printed maps of this part, that the distance of the sea from Nellore, is not represented in any of them, at more than $13\frac{1}{2}$ G. miles, and most of them allow only 12. And although I have allowed 16, it comes considerably within Mr. Ritchie's account.

Cuddapah is determined by the map of the Pennar river: and the construction agrees with its reputed distance from Arcot in a *Malabar* map; or rather a map drawn by a native of the Carnatic. It is there stated at 60 coses; which on the scale adopted for the Carnatic (in page 5), and which allows only $37\frac{1}{2}$ coses to a degree, will correspond with the 96 G. miles, arising on the construction.

Tripetty and Chandeghere (or Kandegheri), the first, a famous place of Hindoo worship; and the latter, the site of the capital of the ancient kingdom of Narsinga, are placed with reference to Dalmacherry, by Montresor's map; and by the MS. account of the passes. Kandegheri is there said to be 22 B. miles (road measure) from Dalmacherry, bearing about E N E; and Tripetty is 3 miles S E from Kandegheri. I have placed Tripetty accordingly: and it stands in the map 53 $\frac{1}{2}$ G. miles, nearly north, from Arcot; and about 66, nearly N W by W, from Madras. Mr. Orme supposed it to be 50 miles N E of Arcot: and the Universal History says it is 22 leagues W N W from Madras.

Calastri appears also in the map of Montresor. There is also a route of General Caillaud's from Polypet to Udegheri, and Nellore, passing through Calastri. I have endeavoured to fix the position of Calastri, by these joint authorities; and have placed it 15 G. miles E N E from Tripetty; and 61 from Arcot: but I have my doubts concerning the accuracy of its position.

Sami-Issuram pass, on the Pennar river, is reckoned in the MS. of the passes, 55 B. miles, or 44 G. miles horizontal distance, west from Nellore; and this position is corroborated by Montresor's map (as far as the apparent rudeness of his materials for this part, may be said to confirm any position), and I have placed it accordingly. It comes within about 15 G. miles, or 9 $\frac{1}{2}$ cosses of Cuddapah; which bears from it W S W.

Udegheri and Sangam, two places in General Caillaud's route, are corrected by Col. Pearse's position of Nellore; and by the relative positions of Sydaporum and Nellore, in a French copy of M. Bussy's marches: Sydaporum being also a position in Mr. Caillaud's route. I am conscious how incomplete the northern part of the Carnatic is, in comparison with the southern part: but all my inquiries have produced nothing satisfactory, on the NW of Polipet. Had the route of General Caillaud been measured, it would have produced several *primary stations*: but as

it is, the scale appears to be ill proportioned in the different parts of it.

Narnaveram and Bomrauzepollam, are both placed on the authority of Mr. Pringle's observations: and the Pullicate lake is from the Jaghire map; Col. Pearse's route; and other authorities. This lake, called by D'Anville, *Ericans*, seems to owe its existence to the same cause as the Chilka lake; that is, to the sea's breaking through a low sandy beach, and overflowing the lands within; for its communications with the sea, are extremely narrow, like the *embouchures* of small rivers. This lake is in extent 33 B. miles from N to S, and 11 over, in the broadest part; and contains some large islands within it. One of these is named Ircum, in Mr. Barnard's map of the Jaghire, published by Mr. Dalrymple: and as M. D'Anville names this island, as well as the lake, *Ericans*, I conclude it to be a corruption, or misconception of *Ircum*.

I have not found it an easy task to fix the positions either of Innaconda, Combam, Adoni, or Canoul. On these four places, many others depend, in the construction of the map; and they are neither of them ascertained to my satisfaction. There is, in particular, a degree of obscurity in the accounts of Canoul, that I cannot clear up. My local information fails me entirely, in this place: and this kind of knowledge is so requisite to a geographer, that no degree of study or investigation, can compensate for the want of it. It not only enables him to reconcile names and situations; but oftentimes furnishes him with a criterion to distinguish the value of his materials. Few Europeans, vagrant ones excepted, have visited these places since the time of M. Bussy (1751), and it is a misfortune to geography, that his marches between Arcot, Hydrabad, Adoni, Canoul, and Seringapatam, have not been recorded, in the same intelligent manner, as the rest of his marches have been; and from whence we have drawn so much information. But, however I may repine, as a geographer; I ought, perhaps, as a philosopher, to be satisfied, that so much has been preserved.

Innaconda (called also Viniconda, and Huiniconda) is a fortress on a hill; within, or bordering on, the Guntoor circar. It is undetermined, as to its precise bearing, from any known place: therefore I have been reduced to take it on the authority of some vague maps, and by a reference to circumstances: and have placed it about N W by N from Ongole (a point in Col. Pearse's route). Mr. Pringle measured the road, and found the distance to be $46\frac{1}{2}$ B. miles; for which I allow 36 G. miles, in horizontal distance. By the *Malabar* map, it is 28 coses, which may be reckoned about 45 G. miles. It is somewhat more westerly in bearing, and also more distant, from Medipilli, than from Ongole.

Combam is reckoned 25 coses from Innaconda; and 32 from Ongole; or about 51 G. miles from the latter. It is placed in the map, at 48 miles distant, and nearly west, from Ongole; but as its parallel is regulated by the assumed position of Innaconda, it is subject, of course, to the same errors. Tavernier's route from Gandicotta to Masherlaw, passed through Combam (which he calls Kaman), and its position accords very well, with the proportion of distance assigned it. More will be said on this subject, hereafter.

Adoni is reckoned to be 66 coses from Combam, by the Malabar map: and 67 by a route transmitted by Col. Harper to the Madras government; and which was collected from the information of his guides, while at Innaconda, in 1781. These coses on the Carnatic scale ($37\frac{1}{2}$ to a degree), are equal to 106 G. miles; and this is the distance allowed in the construction, between Combam and Adoni, westward. And for its parallel, no better authority can be found, than its distance from Gooty, which is situated to the S E of it, two days journey, or about 36 G. miles, according to my calculation; which is founded on some considerable degree of experience in these matters. Adoni, thus placed, is 69 G. miles N N E from Roydroog, and about 44 south of the Kistnah river.

Adoni, as to general position, is about the middle of the peninsula, and exactly in the parallel of Goa. It was, not many years ago, a fine city, and extremely well fortified, situated on the side of one of the branches of the Toombuddra* river; and the capital of a small principality, or rather feudatory province, of Golconda. A part of its history will be found in Mr. Orme's works. It was since assigned, together with Rachore, and Guntoor, to the late Bazalet Jung, brother to Nizam Ally, the reigning soubah of the Deccan. Hyder's desperate grasp fixed on this, as well as the rest of the provinces on the south of the Kistnah, previous to the late war: but all of them were, or ought to have been, restored by the peace of 1782. Adoni certainly was: because the attack of Adoni, then in the hands of the Nizam, was one of Tippoo's exploits, last year (1787).

The position of Canoul appears the most uncertain of all. The authorities for it are, the Malabar map, in which its distance from Rachore, Cuddapah, Adoni, and Combam, are given in coses; but the intersections of these from the different points, do not agree. The map alluded to, is not constructed by a scale, but rudely sketched out, without much proportion being observed either in the bearings, or distances of places, from each other: and the names, and the distances between the stages, are written in the Malabar language. Canoul is there said to be 57 coses from Cuddapah; 88 from Combam; 98 from Rachore; and the same from Adoni: and 36 from Timapet, a place that occurs in General Joseph Smith's route from Hydrabad to Sollapur. By this account, the number of coses between Cuddapah and Rachore will be 85; which is really the distance on the map, within two coses; reckoning $37\frac{1}{2}$ to a degree. Nor are the crofs distances from Com-

* I suppose the termination *buddra* in the name of this river, means the same as the *budda* or *buddar* in Nerbuddah, and Soombudda, in the north part of the Deccan, and in Hindoostan. If the supposition be true, that the names of large rivers undergo little alteration, the language to which *Ganga* or *Gang* belonged, must have had a wide range; since we find it applied both in Ceylon, and at the foot of mount Himmaleh.

bam, and from Adoni, far out; but that from Timapet is irreconcileable. However, as the position of it agrees pretty well with Cuddapah, Rachore, and Combam, it may be concluded that the distance of Timapet is falsely given. In a map of M. Bussy's southern marches, said to be composed by M. D'Anville, Canoul is represented in a very different position from the above result; for there it stands only 18 cosses from Rachore, instead of 28.

Condanore is 15 cosses to the east of Adoni, according to Col. Harper's route.

Rachore, or Adoni-Rachore, a city, on or near the south bank of the Kistnah river, and not far above the conflux of the Toombuddra with it, and below that of the Beemah, has its position from the map of M. Bussy's northern marches.

Rachore is four days journey from Adoni, according to the report of an European who travelled it. This person came from Seringapatam, by way of Sera and Gooty, to Adoni; and communicated this, and several other particulars in his itinerary, to Mr. W. Townsend; who obligingly gave them to me. It is reckoned three days journey from Seringapatam to Sera (or Merki-Seray), six more to Gooty; two from thence to Adoni; and four more to Rachore. If we take the whole distance through these several points on the map, the produce will be 276 G. miles. A day's journey for an ordinary traveller, may be fixed at 22 British miles, in road distance; which reduced to horizontal, will be 17 to 18 G. miles: and it will be found that the 276 miles will be nearly 15 days journey, at that rate: and the intervals are generally well proportioned. Although 22 miles are stated to be a day's journey for an ordinary traveller, yet a cossid or courier goes ordinarily from 30 to 33 British miles in a day: and that for many days together.

Timerycotta, a considerable fort in the Palnaud country (which is a district belonging to the Carnatic, but situated towards the Kistnah river, on the west of Guntoor) governs most of the positions in Guntoor and Palnaud; as also the crossing-place of the Kistnah, in

the road from Madras to Hyderabad. In Montresor's map there are a number of places round Timerycotta; but they have no connection with any other known place. Capt. Davis, in his account of the places in and about the Guntoor circar, says, that Timerycotta is 40 cosses west from Guntoor fort; and Guntoor is placed by the Malabar map nine cosses from Sattinagram; a place on the south bank of the Kistnah, opposite Bezoara; a point ascertained by Major Stevens. The bearing of Guntoor from Sattinagram, we can only infer, from its lying in the direct road to Ongole, to be about SW: but it is strongly corroborated by Montresor's map, which gives the distance between Guntoor and Siccacollum (another fixed point on the Kistnah), at about $25\frac{1}{2}$ G. miles. Timerycotta, then, is placed according to these *data*, in respect of longitude: and is 89 G. miles to the westward of Siccacollum; or 64 from Guntoor, which answers to 40 Carnatic cosses. With respect to its parallel, the Malabar map gives only a circuitous route of 49 cosses to it from Ongole. Mr. Montresor's map makes the distance to be 66 G. miles from Ongole; and the bearing about NW by N: but, as I said before, the connection between these places is imperfect, in his map. Capt. Davis's map (or rather sketch) has it at 57. Again, Montresor makes Guntoor and Timerycotta, nearly under the same parallel, which would reduce the distance to 59. I have allowed $60\frac{1}{2}$: and have been guided principally by the computed distances in the Malabar map, applied to Capt. Davis's bearings, in his circuitous route from Ongole to Timerycotta; and this position agrees nearly with Montresor's idea.

Montresor's map, as is said before, contains many positions round Timerycotta, to the extent of 20 or 30 miles: among others, Currumpoody, Patack, Pongallah, Pulredygur, and Masherlaw, or Macherla. This last place, together with Combam and Doupad, from other authorities, helps me to trace out the route of Tavernier from Gandicotta to the Kistnah, in his way to Goleonda, in 1652. Combam, or Commam, is the same with his *Kaman*, said

to be the frontier town of the Carnatic, towards Golconda. Deopad, is what he calls Doupar; situated, according to his account, in a country that is intersected by many torrents from the neighbouring hills. Col. Harper makes the same remark on Doupad or Deopad: and these torrents help to form the river Gondegama (or Gondlacomma) which gains the sea at Medipilly, and is the nominal boundary of the Carnatic. The Malabar map writes it *Gilligama*, and other accounts give it *Gunta-camma*: Gondegama is the common name. Combam is situated near its source. Tripanty pagoda lay near Tavernier's route, and is a few miles to the north of Doupad. Some have confounded this with *Tripetty*, a more celebrated pagoda in the vicinity of Chandeghere; and 160 miles to the southward of Tripanty. Tavernier's next stage is *Mamli*; which may be recognized in D'Anville's map of Coromandel, under the name of *Mamenda*. His Macheli, is, no doubt, Masherlaw: soon after which he arrived at a large river; which was the Kistnah. It is singular that his curiosity should not have led him to inquire the name of the most capital river, that occurred during his journey.

Tavernier's route would hardly be worth remarking, did not his distances help to corroborate generally, the positions of Combam and Timerycotta. He reckons 77 leagues from Gandicotta to Masherlaw: 42 of which are between Gandicotta and Combam. These leagues, I apprehend, are meant for cosses; a common error of Tavernier's: and it is remarkable that Thevenot falls into an absurdity of the same kind, by reckoning cosses for half leagues. How men of sense and reflection can apply the names of the itinerary measures of their own country, to those of another, when the scale differs so widely, I confess I am at a loss to account. Cosses and leagues, differ at least a third part, in their length: how then can Thevenot say, that a coss is equal only to half a league? Tavernier's whole number of leagues from Gandicotta to Golconda, is 119; and the real distance, through the points of Combam, and Masherlaw, only 176 G. miles: it will follow then, that nothing

more than cosses could be meant, and those rather short than otherwise. Between the Kistnah and Golconda, his account gives 39 leagues or cosses, which interval is 60 G. miles, by my construction. There must, however, be an error in the distance between Masherlaw and the Kistnah, which he reckons only three leagues (*i. e.* cosses); whereas, it cannot be less than seven cosses.

The fort of Condavir is the principal post in the Guntoor circar; and is strongly situated on a mountain, eight cosses to the west of Guntoor, according to Capt. Davis, and 10 from the south bank of the Kistnah. The position of Mongelgary, I am not satisfied about, as there are great contradictions in the accounts of it. Colore is from D'Anville: it is a diamond mine on the southern bank of the Kistnah, and not far from Condavir. Chintapilly and the roads in Guntoor, are from Capt. Davis's sketch, and the Malabar map.

I could get no better authority for the road from Nellore to Hydrabad, than what appears in D'Anville's Coromandel, published in 1753. I have altered the proportion of its parts, by changing the place of Podalah (his Poudela), as it is known to be 12 cosses, nearly W by N from Ongole, instead of the northern position he has given it; for want of such a check as I was enabled to apply, by being in possession of a route across, from Ongole to Combam. It is very extraordinary, considering the long intercourse that the English at Madras, have with Hydrabad, that there should be nothing better of the kind, on record.

The road from Udegherri to Ongole, is also from D'Anville.

Sanore-Bancapour is from M. Bufsy's march, as has already been observed, in the fourth Section, page 249. Sanore and Bancapour, are two forts, lying about three cosses from each other; at 120 G. miles, nearly east from Goa. Mr. Ewart procured (while at Nagpour) a route from Hydrabad to Sanore-Bancapour, and from thence to Chinnaputtun, a city, with a fort of stone; and situated 37 cosses beyond Bancapour. There is nothing to guide the judgment in determining the general bearing of it, further than that

we may conclude it to be to the westward of Sanore-Bancapour, because the road from Hydrabad leads through it; and as the Sanore river (the Toom) was crossed nine coses beyond Bancapour, it may probably bear to the northward of west from it, as the rivers in that part, run to the southward of east (see the map). The distance between Hydrabad and Bancapour (133 coses) determines the scale of coses to be at the rate of $39\frac{1}{4}$ to a degree; so that Chinnaputtun is about $56\frac{1}{2}$ G. miles from Sanore-Bancapour; most probably in a W N W direction. We learn one interesting particular, if true, from this route; which is, that the Nizam's territories extend 31 coses beyond Bancapour.

Bisnagur, or rather Bijinagur, the capital of the ancient kingdom of Narsinga, is situated on the side of the Toombuddra river; and in M. Busby's map, it stands about 30 miles S E or S S E from Bancapour. It was visited by Cæsar Frederick in 1567; and was then a very large city. He reckons it eight days journey from Goa, which, by the calculation in page 287, should be 140 G. miles; but it is only 130 by construction. We are told by Ferishta, that Bijinagur was founded by Belaldeo, King of the Carnatic, in 1314. The Carnatic then included the whole peninsula; or, at least, all that lay to the east of the Gauts. Our histories of the Deccan and Carnatic are very imperfect; and at this day we can hardly distinguish between the kingdoms of Bisnagur and Narsinga; and whether they were two successive, or two co-existing kingdoms. It appears probable, however, that in the 16th century, the kingdom of Bisnagur included the greatest part of the peninsula; and that on the invasion of the King of Visiapour, and other northern princes of the Deccan, the King of Bisnagur retired, first to Penuconda, and then to Kandegheri (or Chandegheri); but still preserved his ancient title of Bisnagur. In 1599, Kandegheri was the residence of a Hindoo king, whose dominion extended over Tanjore and Madura; and in 1640, a descendant of this prince reigned there: and permitted the English to settle at Madras.

Ranni-Bednore, as well as the heads of the Toombuddra river, are from M. D'Anville. We know generally, that this river is formed originally out of two smaller ones, that issue from the eastern side of the Gauts: and these being named *Toom* and *Buddra*, give their names to the confluent river. Farther down, it passes Bisnagur (as is said above, although Cæsar Frederick calls the river of Bisnagur, *Nigonden*), and between that and the Kistnah, it receives the Hindenny, or Endri river, which passes by Adoni; as well as several smaller rivers. The general course of the Toombuddra is represented in the map of M. Bussy's northern marches: and that of the Hindenny is marked more particularly, in the map of his southern marches, by D'Anville. It is also described in the map communicated by Mr. Sulivan, as passing under Chitteldroog, Rydroog, Clitrigally, &c.

M. Bussy's route from Seringapatam to Adoni and Rachore is not to be found in the map of his other marches. Those who cast their eyes on that naked part of the map, will regret its being wanting.

The route from Goa to Galgala is from Mr. Dalrymple's collection; and appears to have been travelled by some Portuguese, who visited Aurungzebe's camp on the Kistnah, in the latter part of the last century; or early in the present.

The environs of Goa and the country to the foot of the Gauts, are from a Portuguese MS. It is from Goa only, if from any quarter, that we are to expect the geography of the tract between the Gauts, Visiapour, and Adoni; and which yet remains almost a perfect void, in the map.

The general courses of the rivers in the peninsula, indicate that the highest part of that region is found in the line between Calastri and Mangalore. If we are to trust report, the country has not generally a hilly appearance between the Gauts and Bangalore; but rising suddenly from the west, at the Gauts on the Malabar side, it declines gradually eastward until it falls again towards the Carnatic; so that the Gauts form a sort of a terrace on an immense

scale; and ought to be regarded rather as a region, than a chain of mountains.

The Gauts are marked only in certain places where the different roads cross them, or where they have been viewed from the coast. This famous Apennine, which marks, with more precision, perhaps, than any other boundary whatever, the line of summer and winter, or rather of dry and wet; extends 13 degrees of latitude; that is, from Cape Comorin to Surat (with the exception of the gap mentioned in page 276), at unequal distances from the coast: seldom more than 70 miles, and commonly about 40: and within one short space only, it approaches within six miles. Although the altitude of these mountains is unknown, yet it is sufficiently great (being from 3000 to 4000 feet) to prevent the great body of clouds from passing over them; and accordingly, the alternate N E and S W winds (called the monsoons) occasion a rainy season on one side of the mountains only; that is on the windward side. It would appear, however, that during the first part of the rainy monsoon, on the Malabar coast (May and June), a considerable quantity of rain falls in the upper region, or Table Land of Mysore, &c.: but it is supposed that this weather is rather of the nature of the periodical rains within the tropics, than of the proper monsoons. Be it as it will, there is no doubt but that great quantities of clouds pass over the western edge of the Gauts. But the quantity of rain that falls *above*, does not bear any kind of proportion to that which falls *below*, the Gauts.

By Lieut. Ewart's account of the weather at Nagpour, in the very centre of India; the seasons differ but little from their usual course in Bengal, and on the western side of India: that is, the S W monsoon occasions a rainy season: but the rains are not so violent, nor of such long continuance, as in those places. At the mouth of the Godavery river and its neighbourhood, the S W monsoon occasions a rainy season also; and the Godavery is then swollen, and overflows: and this part is about as far to leeward of the Gauts, as

Nagpour is. It is possible, however, that the clouds which occasion a rainy season at the mouth of the Godavery, may come from the east of Cape Comorin: though I rather believe the contrary, as the Cape bears S S W from it, and the reigning winds are much more westerly. We may, I think, conclude then, that the region of the Gauts, shelters a particular tract only; beyond which, the light and elevated clouds that pass over it, descend in rain. Madras is within the limits of the sheltered tract, though at least 300 miles to leeward of the Gauts: Rajamundry (near the mouth of the Godavery) and Nagpour, may be about 500. It would be curious to know the exact limit of wet and dry. If I mistake not, until lately it was a general opinion, that the Gauts extended from the northern (or Bootan) mountains to Cape Comorin; and occasioned a diversity of seasons, at one and the same time, throughout all India. But the truth is, that different seasons exist at the same moment, only in a part of the peninsula: for the cause ceases in the parallel of Surat; where the S W wind, no longer opposed by a wall of mountains, carries its supplies of moisture uninterruptedly, both far and near, over the whole face of the country. For some particulars respecting the northern extremity of the Gauts, see page 258.

As the peninsula, or tract discussed in this Section, contains more interesting matter than could well be comprised within the space furnished by such a scale, as could conveniently be applied to a general map, of so large a tract as India; it was judged necessary to form another map of the peninsula, on a larger scale. Those who may become possessed of it, will find the account of its construction in this Memoir: which is common to both maps, throughout this whole Section; and also in the first Section, as far as the map of the peninsula is concerned. The scale of this map, is just double that of the general one.

SECTION VI.

The Countries between HINDOOSTAN and CHINA.

It has been said before (page 48), that the first ridge of mountains towards Thibet and Bootan, forms the limits of the survey to the north: to which I may now add, that the surveys extend no farther eastward, than to the frontiers of Afsam and Meckley.

The Jesuits' map of China, as given in Du Halde, places the western boundary of Yunan (the westernmost of the provinces of China) between the 97th and 98th degrees of east longitude, in the parallel of 24° : so that the eastern frontier of Bengal (Silhet) is within 350 British miles of the western part of China; or to speak comparatively, the same distance as Silhet is from Calcutta. Here one is apt to wonder, that, considering their proximity to each other, there should be no communication between the two countries. The reasons probably are, that Yunan does not produce such manufactures as are in request among foreigners; and that the courses of the great navigable rivers in those parts, are unfavourable to a communication by water. The space between Bengal and China, is occupied by the province of Meckley, and other districts, subject to the King of Burmah, or Ava.

The river *Nou-Kian*, little, if at all, inferior to the Ganges, runs to the south, through that angle of Yunan which approaches nearest to Bengal; where the Jesuits, who formed the map of China, left it, in its course to the south-west. This river, M. D'Anville conceived to be the same with that of Pegu; in like manner

as he supposed the Sanpoo to be the Ava river: but succeeding accounts have left no doubt remaining, that the Nou-Kian is the river of Ava. In the Modern Universal History (Vol. VI. p. 205) is an account of a voyage performed on this river, by four Chinese, about the middle of the last century. They went from Yunan to Yuntchian, and from thence to the frontiers of Ava; where they embarked, and went down the stream, to the city of Ava.

In my account of the construction of the sea coasts (page 39), my authorities for describing the *delta* of the Ava river, from the sea, to the parallel of 18° , are given. The Dutch MS. map there quoted, describes the whole course of the river, as high up as the city of Ava itself; which it places in latitude $21^{\circ} 48'$; and also says in a note "*by observation:*" and indeed, the whole scale of the map seems to be formed from the difference of latitude.

The difference of longitude, as inferred from this Dutch map, places Ava in 97° . But Capt. George Baker, of whose accuracy I entertain a high opinion, took the bearings, and estimated the distances, the whole way from Negrais to Ava; and the result, corrected by the observation at Ava, $21^{\circ} 48'$, gives the longitude $97^{\circ} 45'$: and this longitude I have adopted. Capt. Baker's estimation of the courses and distances between Negrais and Ava, placed the latter in lon. $97^{\circ} 54'$, lat. $22^{\circ} 5'$; or $17'$ to the north of the observation, recorded in the Dutch map. This error, on a distance of about 400 miles, is trifling; being less than a 20th part.* Ava

* Lest the particulars from whence the river of Ava, &c. is constructed, should be lost, I have recorded them here.

From Negrais to Persam NNE 45 G. miles.	Camma to Meachagong N by E 20 G. miles.
Prygee - NNE 45	Mellone - NNE 35
Head of Negrais river NE 60	Raynangong NNE 35
Lundsey - N 35	Salluma - N 25
Sabidun - NNW 25	Youngeve NE by N 25
Prone - NE 18	Ava - ENE 70
Camma - N by E 15	Monchaboo - N 45

The whole traverse gives a course of N $27^{\circ} 30'$ E., distance 408 G. miles. The distance corrected, is 389.

The Dutch map gives a bearing of N $35^{\circ} 50'$ W., distance 80.3 miles, between Syrian river point (meaning the point of conflux of the Syrian and Dogon rivers), and the head of Negrais river; the upper point of the delta.

stands in the old maps, in lat. $25^{\circ} 20'$, lon. $96^{\circ} 36'$. The particulars of the course of its river, I have taken from the Dutch map; as Capt. Baker describes only the general direction of it.

Monchaboo, a city, and the residence of the King of Burmah, or Ava, in 1755, is by Capt. Baker's account, $38\frac{1}{2}$ G. miles north from Ava: and this was the extreme point of his travels that way.

The Nou-Kian is named Irabatty by the people of Ava; and is said by them, to be navigable from the city of Ava, into Yunan. Monchaboo being within 130 B. miles of the Chinese frontier, we want only so much, to complete the course of the river in the map. This break is there described by dotted lines.

Capt. Baker describes the country bordering on the Ava river, from the sea to Lundsey, as being very flat, and the soil rich: and, I suppose, like that at the lower parts of the courses of the Ganges, Indus, and other capital rivers, formed out of the mud deposited by the inundations of the river. This low tract is named Pegu, and formed an independent kingdom in 1734, when it was reduced by the King of Burmah, to the state of a dependent province.

Burmah borders on Pegu to the north, and occupies both banks of the river, as far as the frontiers of China. On the north-west is Meckley, which we have before taken notice of: and on the west Aracan (or Reccan) and Roshaan. On the east, it has the kingdom or country of Upper Siam; which, Capt. Baker informs us, begins at a small distance eastward from the city of Ava: a ridge of mountains separating it from Burmah and Pegu.

The King of Burmah, whose reputed capital is Ava, and from whence the whole kingdom, though erroneously, is often denominated, is said to possess not only the country of Meckley, in addition to those of Pegu and Burmah; but also the whole tract which lies on the north of it, between China, Thibet, and Assam. Du Halde's map speaks positively, as to this point; but with what

truth I know not, as I have never been able to gain any information on the subject.

Capt. Baker informs us, that the country of Burmah, adjacent to the banks of the Irabatty, or Ava river, between Pegu and Monchaboo, is in some places hilly, and in others flat; but not so low as to suffer inundations. Its produce is, in most respects, nearly the same, as that of the countries contiguous to the Ganges; and, it is remarkable, that the lands which produce the greatest quantity of saltpetre, are much about the same distance from the sea, as those of the same nature near the Ganges, and Indus.

Mr. Verelst, who meditated an expedition into Meckley from Bengal, and actually advanced as far as Cospour on his way to it, in 1763; was informed by his Meckley guides, that after passing the first ridge of mountains beyond Cachar, he would find a fertile and well inhabited country all the way to Ava. He, however, went no farther than Cospour; but the particulars of the road between that place and Ava, are described from the intelligence furnished by the guides who attended him.

The country of Burmah produces some of the best teek timber in India. The forests which produce this most useful and valuable article, are situated between the western bank of the Ava river, and the country of Aracan; and are only 250 miles from the sea, by the course of the river.

The Sanpoo, or Thibet river, was supposed by M. D'Anville to be the same with that which is called, in the lower part of its course, the river of Ava: but we have not the least doubt at present, of its being the same with the Burrampooter, which enters Bengal on the north-east, and joins the Ganges near the sea. I traced it in 1765, to about 400 miles above the conflux; that is, as high as the latitude of 26° , longitude 91° ; where the Bengal districts end, and those of Assam begin: but I was not permitted to go any higher. However, some few Europeans, engaged in the

Goalparah trade, and among others, M. Chevalier, the late governor of Chandernagore, by permission of the king, went as high up as the capital of Afsam, about the year 1762: but was under a considerable degree of restraint, with respect to making remarks, either on the course of the river, or on the country. As M. Chevalier, however, went on a very large embarkation, we are convinced that the river is navigable for large boats, through a space about equal to the distance of Buxar from the sea; that is, between 600 and 700 miles. It may probably be navigable much higher up; though its navigable course cannot be equal to that of the Ganges; this flowing chiefly through a level country, and the Burrampooter through a mountainous one.

I have placed the capital of Afsam, Ghergong (or Kirganu), 160 G. miles nearly E by N from Goalparah, according to the report of the Afsamers. They also informed me, that the Burrampooter has a very long course previous to its entering Afsam; and that it comes from the N W through the Thibet mountains. Now the Lamas' map of Thibet in Du Halde, describes the course of the Sanpoo, to within 120 G. miles of the assumed situation of the capital of Afsam: and still nearer to some parts of the Burrampooter, that are known, and have been described by the Afsamers.

These facts, together with those respecting the Ava river and Nou-Kian, establish (I think) the strongest presumptive proof possible, of the Sanpoo and Burrampooter being one and the same river, under different names: and positive proof can never be obtained, but by actually tracing them; a circumstance unlikely ever to happen to any Europeans, or their dependants. The interval between the known part of the Sanpoo, and that of the Burrampooter, is described in the map by dotted lines. The Ayin Acbarree says, that the Burrampooter comes from Khatai: meaning China. We must not forget that the same book says, that the source of the Ganges had never been traced, at that time.

Some difficulty arises in fixing the position of Lassa, the capital

of Great Thibet. We have the history of the Lamas' map in Du Halde, which is not altogether favourable to its character; especially in the parts towards the source of the Sampoo and Ganges. A close examination of its particulars, turns out still more unfavourable to it. For instance, the place where the Ganges enters the plains of Hindoostan, is placed under the 28th degree of latitude; though it is known by our late observations, to be in about 30° . With respect to the longitude, we have no grounds, on which to form an exact comparison: but we may conclude generally, that the distance between Lassa and Hurdwar is near two degrees of longitude less than it ought to be: I mean, provided that Lassa be near its true position with respect to Pekin, in the Lamas' map. The difference of longitude between them is $24^{\circ} 17'$; Lassa being placed $9^{\circ} 40'$ east from Greenwich.

With respect to Hurdwar, the proof is positive of its being two degrees farther to the south than it ought to be; and this furnishes a strong presumptive one, that all the western parts of the map, are faulty in the same proportion: and that the sources of the Ganges and Sampoo, instead of being between the 29th and 30th degrees of latitude; are several degrees farther to the north; and probably between the 3rd and 34th: of which more will be said in the sequel. Nor am I singular in this opinion; for M. D'Anville found it necessary to make an alteration of two degrees in latitude; and to adopt the very longitude which I have suggested. And I should be wanting in candour, and in respect to his memory, should I forbear to do justice to his nice discernment, in placing the entry of the Ganges into Hindoostan, by inference from Delhi, almost in the very spot where I have now placed it, by actual survey.

But M. D'Anville, ignorant of the respective positions of Bengal and Lassa, adopted the latitude of the latter place, given in the Lamas' chart: that is to say, about $29^{\circ} 35'$. Father Giorgi (*vide Alphabetum Thibetanum*) says, the latitude of Lassa is "about 30

" degrees and a half;" and by what follows, it can hardly be in a lower parallel.

The late Mr. George Bogle, who was sent by the Governor of Bengal (Mr. HASTINGS) on an embassy to the Grand Lama of Thibet, in 1774, travelled by way of Coos-Beyhar, Tassasudon, and Paridrong, to Channanning, the then residence of the Lama, and nearly in the same parallel of latitude with Lassa. Unfortunately, very little geographical information was furnished by this journey; unless the bare account of the number of days he was on the road between the two last places, may be deemed such. However, this information, such as it is, joined with other circumstances, helps to assure us that Lassa is farther to the north, than the Lamas' map represents it: for Tassasudon, the capital of Bootan, is by the accounts of the Bootanners, about 46 G. miles horizontal distance from Luckiduar, in a direction nearly north; and Luckiduar being in $26^{\circ} 56'$, Tassasudon cannot be in less than $27^{\circ} 43'$. Paridrong (called Paridsong in the Lamas' map) is a considerable way beyond that, and may be supposed to be in 28 degrees at least: but the Lamas' map places it in 27° ; making an error of a whole degree of latitude. This place, and the chain of mountains near it, have been regarded as the common boundary between Thibet and Bengal; but Mr. Bogle has cleared up this matter, by assuring us that Paridrong is the frontier town of Thibet towards Bootan, and not towards Bengal. And we have before ascertained that Bootan occupies an interval of at least a degree of latitude between Bengal and Thibet. Thibet and Bootan are often confounded together: the latter is a feudatory or dependency of the former, and borders on Bengal.

Thus, I flatter myself, this discussion respecting the situation of Paridrong, joined to the information of P. Giorgi, will convince the reader, that the latitude of Lassa, if not perfectly right in my map, is, at least, nearer the truth than it has usually been represented. Its longitude is taken from the Lamas' map, in which it is reckoned

$24^{\circ} 17'$ west from Pekin, or $91^{\circ} 40'$ east from London. Had the bearings and latitudes of Mr. Bogle's route been taken, we should not only have been able to determine the position of Lassa, with some degree of accuracy (as the direction of the road is so much to the north), but also most of the intermediate places. Mr. Bogle was sixteen days on the road from Paridrong to Chanmanning. The distance assigned between these places in the Lamas' map, is about 167 G. miles of horizontal distance: it is about ten more on the map.

The southernmost ridge of the Bootan mountains, rises near a mile and half perpendicular, above the plains of Bengal, in a horizontal distance of only 15 miles; and from the summit, the astonished traveller looks back on the plains, as on an extensive ocean beneath him. There are not many passes through this ridge, and all are fortified. The fort of Dellamcotta, which commands the principal pass, was taken by storm in 1773, by a detachment under the command of Capt. John Jones; and the fame of this exploit made the Thibetians sue for peace; and was the immediate occasion of Mr. Bogle's embassy. The road between Bengal and Tassasudon, lies chiefly over the summits of stupendous mountains, or along the borders of craggy precipices; so that the direct distance is not easily ascertained, even by the most intelligent traveller.

Between Tassasudon and Paridrong, is a chain of mountains still higher than the other. They are visible from the plains of Bengal, at the distance of 150 miles, and are commonly covered with snow. These are a continuation of the mountains *Emodus* and *Paropamissus* of the ancients; and are sometimes by the moderns erroneously called *Caucasus*. In the Lamas' map, they are called Rimola: and by the people of Hindooostan *Himmaleh* (see page 126). I take it for granted that Himola or Himmaleh ought to be substituted for Rimola, in Du Halde's map. I suppose them to be in point of elevation equal to any of the mountains of the old hemisphere. Indeed, the country of Thibet is, altogether, one of the highest in

Asia; it being a part of that elevated tract which gives rise not only to the rivers of India and China, but to those also of Siberia and Tartary: for if we examine the map of Asia, we shall find that most of those capital rivers rise between the 31st and 47th degrees of latitude, and between the 70th and 97th degrees of longitude; from whence they run in every direction to the sea, as the Rhine, Rhone, Danube, and Po, do from the Alpine tract in Europe.

Father Giorgi, whom I have mentioned before, has given us, in his *Alphabetum Thibetanum*, an itinerary between Calcutta and Lassa. The distances he estimates in miles, which he probably meant for Italian, although they agree nearly with English ones. For he reckons 284 between Cosimbuzar and Patna, which is the exact number of measured statute miles between the two places. And between Singhya and Maifsy, he reckoned 40, for 37 measured ones. We may therefore conclude that he was equally fortunate in proportioning the rest of his distances; although the roughness of the road will not always admit of forming any just proportion between the distance by the road, and the horizontal distance. We are almost entirely in the dark as to the particular direction of his course.

Catmandu, the capital of Napaul, is placed according to the authority of some MS. maps made by some missionaries who travelled from Bettyah to that place: and I found no material disagreement between their accounts and Giorgi's. I have therefore placed Catmandu 105 G. miles nearly north from Maifsy, that is, in latitude $28^{\circ} 6'$.

From Catmandu to Lassa, Giorgi reckons 504 miles by the road; but it must be observed that he omits to mention the distances of two stages between Khansa and Mescinzungh: and as the preceding ones were of 14 and 16 miles, and the two succeeding ones 16 each, I may venture to add 32 miles for the two omissions; and then the whole distance will be 536 B. miles, or 462 G. ones.

The horizontal distance between Catmandu and Lassa (the latter being placed as described in page 301), is 346 G. miles: so that according to Giorgi's distance, one mile in five, will be taken up by the windings of the road; and this is not improbable, considering the mountainous nature of the country; for in the flat countries of Hindooostan, the proportion is sometimes 1 in 7.

The territories of Napaul extend to the mountains of Rimola, as they are called in the Lamas' map. Giorgi does not give the modern name of them; but justly concludes that the ancient one was Emodus. These are a continuation of the chain between Talsasudon and Paridrong. Between Catmandu and these mountains, he passed by a famous place of worship, called by him *Nogliocot*, but by the Bengalese, Nagorkote; which gives name to a pass that leads to it, through the Bootan mountains, on the north of Purneah. (There is also a famous place of worship of nearly the same name in the mountains of Lahore). He also crossed the upper part of the *Kof's*, or Cosa river, which takes its course through Purneah to the Ganges.

Tankia, or Tinkia-ling, is a fortrefs and town situated at the hither foot of mount Langur, a second ridge of stupendous mountains, situated about 50 miles beyond mount Rimola; and said to abound with suffocating exhalations, which increase as you ascend; but are weakest when the mountains are covered with snow. Tankia is the first place in Giorgi's itinerary, that can be recognized in the Lamas' map: for Nialma on the Nitchou river (probably the *Nobolba* of Giorgi) does not agree with any of Giorgi's names, although its situation does with Catmandu; which, however, the Thibetians call Jangbu.

About 25 miles beyond mount Langur, is the beautiful valley of Tingri, said to be 50 miles in length, though but narrow. It is described by Giorgi as an earthly paradise, in every respect save the sharpness of the air.

The next place of note is Zuenga, or Tzuenga, a castle or fortrefs on the river Bontsu (supposed by Giorgi to be the *Bantiso* of Ptolemy), and about 90 B. miles from Tankia. From hence two roads lead to Lafsa: the northernmost by Sgigatche (or Jiecsee, as it is called in the Lamas' map) and Rimbu; the other, and which was travelled by Giorgi, is by Kiangse, or Tchiantse. He speaks of wild horses variously spotted, in great numbers on the banks of the Bontsu. These, I presume, are of the kind annually brought for sale into Hindooostan, where they are known by the name of *Tanyans*: and are of a hardy breed.

Kiangse is represented as a fine city and fortrefs; with a convent near it, which is so very extensive and magnificent, that it has the appearance of another city.

About 50 miles beyond Kiangse, and three days journey short of Lafsa, is the famous lake Palte, called by the natives Jamdro, or Jangso. It is of so great extent, that according to the report of the natives, it requires eighteen days to walk round it. In the Lamas' map, however, the circumference is only 150 British miles. In the middle of it, there are, according to Giorgi, a continued range of hillocks and islands; or, according to the Lamas' map, one large island, incircled by a lake from three to eight miles wide. On the western shore of this island, or congeries of islands, is a monastery, and the seat of the *Lamissa** *Turcepamo*, or *The Great Regenerate*: in whom the Thibetians think that a divine spirit is regenerated, as in the Great Lama. The road from Kiangse to Lafsa lies along the north side of this lake, a day and half's journey.

Between the lake and the river Sanpoo, which is about 12 miles, another very high ridge of mountains crosses the road. This ridge is named Kambala, and from the top of it may be seen, towards the north, a range of still higher mountains, covered with snow.

* *Lama* signifies a priest, or minister of religion; and *Lamissa* is the feminine of *Lama*.

The river Sanpoo,* or, according to Giorgi, *Tzangciu*, or *Tzanga*, is seven miles from the foot of mount Kambala ; and is crossed in the way to Lassa, about 12 miles farther on, either over a bridge, or in a boat. The bridge, as well as most others in this country, is composed of iron chains stretched from side to side, with planks or logs laid across them.

Giorgi says that the chains are composed of 500 links, each a foot long. † We may conclude that the bridge is laid over the narrowest part they could find, which, by this account, is 160 English yards in breadth ; otherwise we might expect a larger body of water in a river that had ran at least seven or eight hundred miles ; and had received into its bed so great a number of streams. I compute that at this crossing-place, the Sanpoo (which is afterwards called the Burrampooter) has as far to run to meet the sea, as the Ganges has at its first entry on the plains of Hindoostan ; that is, about 1350 B. miles.

The city of Lassa is, by the road, about 24 miles to the north-eastward of the crossing-place of the Sanpoo ; and is situated in a spacious plain. It is not considered as a large city ; but the houses are of stone, and are spacious and lofty. The mountain of Putala, which contains on its summit the palace of the Grand Lama, the high-priest and sovereign of Thibet, is about seven miles on the east of the city.

Much confusion arises from the application of so many different names to this capital of Thibet. Giorgi tells us, that the proper name of it, in the language of Thibet, is Baronthala ; but that the Tartars call it Lassa, or Lahafsa. Other accounts call it Tonker ; and apply the names Lassa and Baronthala to the district which contains Tonker and Putala. And again others give the name of Putala, instead of Lassa, to the capital of Thibet. But we ought to apply the name Lassa, or Lahafsa, to the capital ; and to consider

* Sanpoo, in the language of Thibet, means *The River*.

† I take it for granted that he means Italian feet.

Putala as the castle and palace of the Lama, and his ordinary place of residence.

By Thibet, or more properly Great Thibet, we are to understand all that vast country extending from the sources of the Indus to the borders of China: and from Hindoostan, to the great desert of Cobi, northward; though we have but a faint idea of its extent towards that quarter. Its length from east to west cannot be less than 1600 British miles: its breadth is very unequal. We are informed generally that it is divided into three parts; that is, Upper, Middle, and Lower Thibet. The upper division seems to respect the countries towards the sources of the Ganges and Sanpoo rivers: the middle, that in which Lassa is situated, and of which it forms the centre: and the Lower Thibet, that which borders on China. But the subject is obscure, and likely to remain so. Little Thibet, which is situated between Upper Thibet and Cashgur, is rather a dependency of the latter, than of Great Thibet.

Considering the exceeding rough and sterile state of the country of Thibet, and the severity of its climate, from its wonderful elevation, we are astonished to find its inhabitants in a high state of civilization; their houses lofty, and built of stone; and the useful manufactures in some degree of improvement. All these advantages they probably owe to their vicinity to the Chinese; to whom, indeed, the Lama is tributary. For an account of Thibet, see Astley's Collection, Vol. IV. Phil. Trans. Vol. LXVIII. *Lettres Edifiantes*, Vol. XV. and the *Alphabetum Thibetanum*.

With respect to the heads of the Ganges and Sanpoo rivers, although they were visited by the Lamas or priests, sent by the Emperor CAMII, whose laudable curiosity led him to add these particulars to the geography of Thibet; yet we are far from being well informed, concerning the true positions of these celebrated fountains. A late publication by M. Bernoulli (who has done me too much honour in the course of it), contains, among a variety of other matter, a map of the courses of the Ganges and Gogra rivers;

drawn by M. Anquetil du Perron, from the materials of the late P. Tiefentaller. This map is highly interesting, on the score of its containing the course of the Ganges, as high up as the *Gangoutra*, or cavern, styled by the Hindoos, the cow's mouth; and which is near 300 miles above the place where the Ganges enters Hindoo-stan: as well as the course of the Gogra river, to its source, in the western part of Thibet. Unfortunately, no observations appear to have been made for the purpose of determining the latitudes of either of these places: which, on a course approaching to meridional, would have furnished a rule for correcting the distances: those remaining quite problematical, from the circumstance of the route's being very crooked, and passing through a very mountainous country; to which the scale of computed coses cannot be applied, with any degree of certainty. What is yet more against the latter part of the performance (the Gogra river) is, that P. Tiefentaller did not visit the source of it, himself, as he did the Gangoutra; but stopt short at a place not far within the Kemaon mountains, and took the account of the upper part of its course, from a *native* (of Hindoostan we may presume). The names of places, and remarks, are written in the Persic character, and translated (it appears) by M. Anquetil du Perron.

But notwithstanding any imperfections that may be imputed to the materials, or want of judgment in determining the scale; this map conveys much intelligence respecting the heads of the Ganges and Burrampooter rivers, as well as that of the Gogra; if we employ the lights furnished by Du Halde, in his map of the heads of the Ganges and Sanpoo, to illustrate the subject before us. Let us proceed to the examination of it, without any regard to nicety of scale.

The Gogra or Soorjew river, then, is traced into a lake named *Lanke-Dbe*; which has immediately on the east of it, but without communicating with it, a much larger lake, named *Mausaroar*; out of which proceed two rivers, the one to the west, or N.W,

the other to the east, or S E. Both of these lakes are said to be situated within Thibet; as indeed some of the villages on the bank of the Gogra, much farther to the southward, are. By the construction of M. Anquetil's map, the site of these lakes is carried as high up as the latitude of 36° : however, by an analysis of the scale, they can hardly be higher than $33^{\circ} 4'$; as will be presently shewn. Now, in the Lamas' map of Thibet, the heads of the Ganges and Sampoo rivers (which last, is called the Burrampooter, in the lower part of its course) are separated only by a ridge of mountains, named Kentaisse. The head of the Ganges is composed of two streams, which run westward; and the southmost of these branches runs through two lakes, of which the first is named *Mapana*, and the second *Lanken*. These lakes are placed in respect of each other, as Tiefentaller's are; and the names of the corresponding ones, are Lanke in one, and Lanken in the other account: and *Mansaroar*, and *Mapana*. The names of the latter have certainly no affinity with each other; but the similitude in point of situation, remains. The river that runs from the Lanken lake in Du Halde, is named *Lank-tshou*: and that from the Lanke lake of Tiefentaller, is the Gogra. With regard to the two rivers that issue from the Mansaroar lake of Tiefentaller, that which runs to the west is said to be the Satloudj (Setlege), a river that has been noticed in page 102, as the easternmost of the five Panjab rivers. This particular, however, the author himself discredits, and very justly: and the reader by turning to the map of the heads of the Indus, &c. at page 200, may satisfy himself as to the probability of it. In my opinion, this is the southernmost of the two heads of the Ganges, above noticed; and which is known to run by Dsaprong (or Chaperang), a considerable city not a very great way to the westward of these lakes (vide Lama's map in Du Halde, or D'Anville's map of Asia). If it be objected that the Ganges is too famous a river to escape the notice of the people who knew the Burrampooter, at its source; I answer, that I do by no means believe that the people

in Thibet know the Burrampooter, by any other name than that of Sanpoo; and that the word Burrampooter is an interpolation. Indeed the writing in the map, imports only, " it is said that the " Burrampooter, &c." and the translation of the Persic writing, at the efflux of this eastern river, gives a very different idea; being "*Grand riviere qui va du côté de Neipal*" (or Napaul). It is clear, however, that the people have an idéa, that the western river has a very long course. I scruple not to believe, that the Lanke lake of Tiefentaller, is the Lanken of Du Halde; and that the Mansaroar of one, is also the Mapana of the other: and that the circumstances relating to the effluxes of the rivers, which appear to contradict each other, have not been carefully examined into, either by the one, or the other party. As the Mansaroar lake is said to be 60 *milles Indiens* (which ought to mean *cosses*) in circumference, that is, 115 B. miles; we can hardly suppose that the native who furnished the account, made the tour of it, either to measure its extent, or to explore the heads of the rivers: and on the other hand, the Lamas sent by CAMHI, might take a great deal of their account on trust. Therefore without contending about the exact circumstances of the case, I have described the Ganges (that is, the southern branch of it) as issuing out of the lake Mansaroar: but have not regarded the eastern river as the Burrampooter, or Sanpoo; because it would be doing too much violence to the account given by the Lamas; which describes the Sanpoo as issuing from the eastern side of mount Kentaisse, and at least 40 miles from these lakes. Besides, the Lamas give an account of a third lake, named Conghé, which intervenes between the Mansarear lake, and the head of the Sanpoo. If I am mistaken in my conjectures, I cannot mislead others, while the map is accompanied with this discussion. The Lamas' map which appears in Du Halde, places the head of the Ganges in latitude $29\frac{1}{2}^{\circ}$; and M. D'Anville found it necessary to remove it almost as high as 32° . In the present map, it stands in $33\frac{1}{4}^{\circ}$: all which may serve to show how vague a per-

formance the Lamas' map is, which errs $3\frac{1}{2}^{\circ}$ in latitude. It also placed Lassa, which ought to be a well-known position to them, a full degree too far to the south.

In the construction of the map of the Gogra, 32 cofses are reckoned to a degree, in a country, the most rugged and mountainous, imaginable; while 42 is the standard in the level country. A distinction, however, must be made in the scale of the upper and lower parts of the course of the river. For, from Mirzapour, which occurs in my map of Oude, to the lake Douloo-Sagur, the country is generally level: and was also explored by Tiefentaller himself; while the upper part is taken from the reports of a native. Therefore I have allowed 48 cofses to a degree, between those two points; so that the distance will be 98 G. miles, instead of the 131 in the map. Then for the upper part of the river, I have allowed 60 cofses to make a degree, instead of 32 : by which the distance from the lake Douloo-Sagur, to the lake Lanke, is only 230 G. miles, instead of the 373 on the map. To those who may object to so great a diminution, as from 60 to 32 ; I shall observe, that 32 , or even $37\frac{1}{2}$ cofses to a degree, is a proportion widely different from that which my experience suggests: and which allows 42 in the level country of Hindoostan proper (see page 5): and whosoever has travelled in very mountainous countries, and has moreover traced the course of a river through it; will not object to the diminishing to 1 , what was $1,43$ in the plains: for this is the proportion between 60 and 42 .

If Tiefentaller's scale is right, the Lanke lake would be in latitude 36° and upwards; which I consider as highly improbable. It is certain that our best maps of Asia (that is, D'Anville's), present nothing but a blank space, in the part assigned to the heads of these rivers, by M. Anquetil du Perron: and therefore, there is no positive evidence against it.

In ascending this river Gogra, we find noted in the map, not far within the first ridge of mountains, and near the second ridge,

three subterraneous caverns, from whence proceed with violence, fire, wind, and water. No other particulars are given. About 30 miles higher up, the Gogra forces its way through that vast ridge which has been often taken notice of before, under the name of Himmaleh, and which is a branch of the Emodus, or Imaus, of the ancients. This ridge, which is covered with snow, and visible from the plains of Hindoostan, appears to be the general boundary of Thibet, through that whole extent from the Ganges to the Teesta river; inclosing between it and Hindoostan, a tract of country, from a 100 to 180 miles in breadth; divided into a number of small states, none of which are understood to be either tributaries or feudatories of Thibet: such as Sirinagur, Almora, Kemaon, Gorka, Napaul, and Morung. Bootan, a feudatory of Thibet, closes on the east of this tract; and is the extent of our knowledge, as to particulars, that way.

The small number of towns and villages on the banks of this river, induces one to suppose that the western part of Thibet, is no better inhabited than we have before described the eastern part of it to be. Indian names prevail, even within Thibet: and a temple of Mahadeo is found on the banks of the Mansaroar lake.

We have before stated the distance of the cow's mouth, or Gangoutra, to be about 280 or 300 road miles, above Hurdwar; where the Ganges enters the plains of Hindoostan. As the compass of Tiefentaller's map of the Ganges, declines 12 degrees more to the westward of north, than that of the survey does, between Allahabad and Hurdwar; this allowance is made accordingly: and Tiefentaller's distance exceeds that of the survey, within the same space, which is 331 G. miles, about $\frac{2}{3}$ of the whole. Not being absolutely certain whether or not Tiefentaller took the latitude of Gangoutra, I did not venture to alter the parallel in which he has placed it, 33°: but contented myself with correcting the bearing 12 degrees; thereby shortening the distance, which was originally 240 miles, to 227. If the latitude was not taken, by celestial

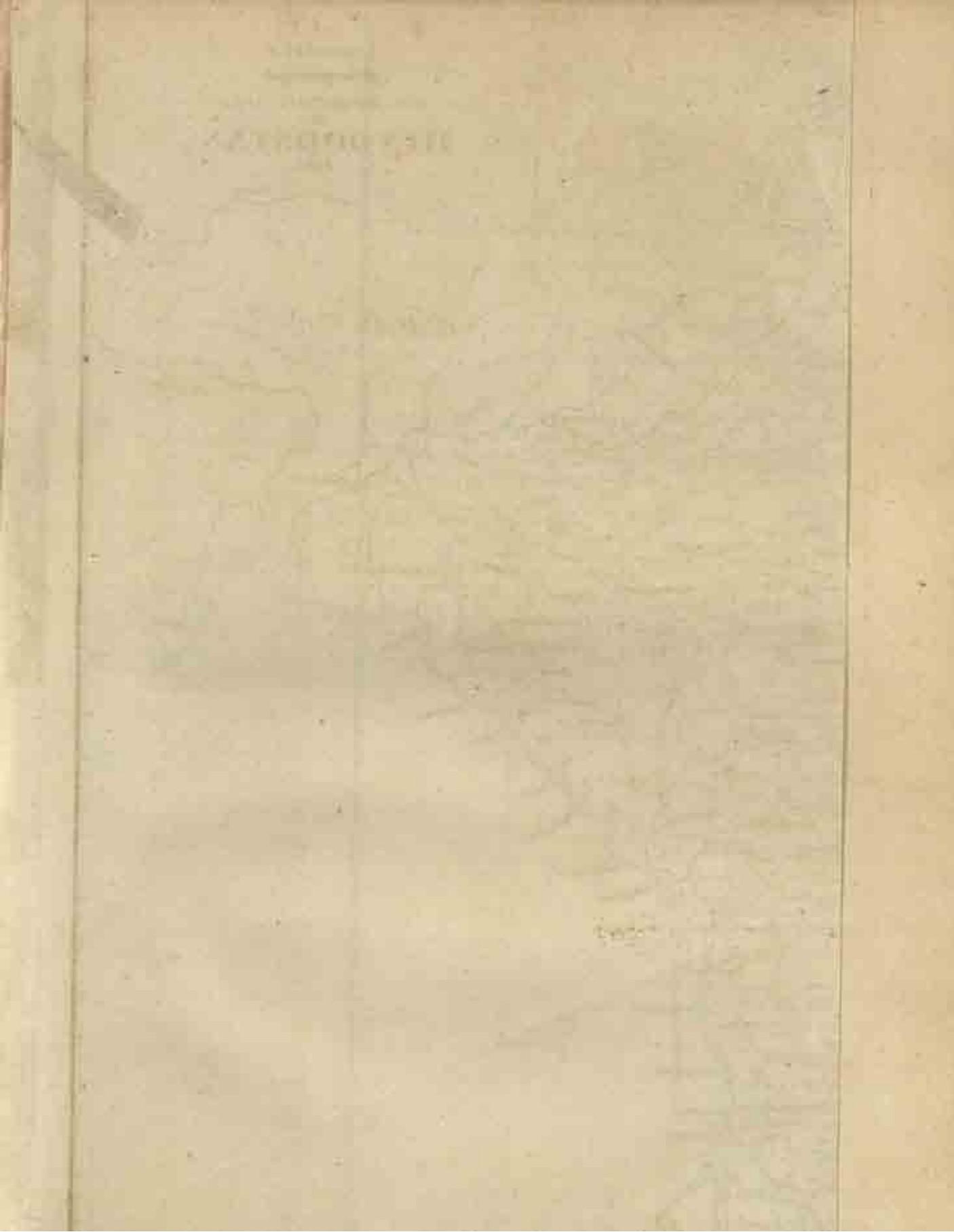
observation, but the distance calculated on the scale of $37\frac{1}{2}$ coses to a degree, the Gangoutra will still be placed too far to the north.

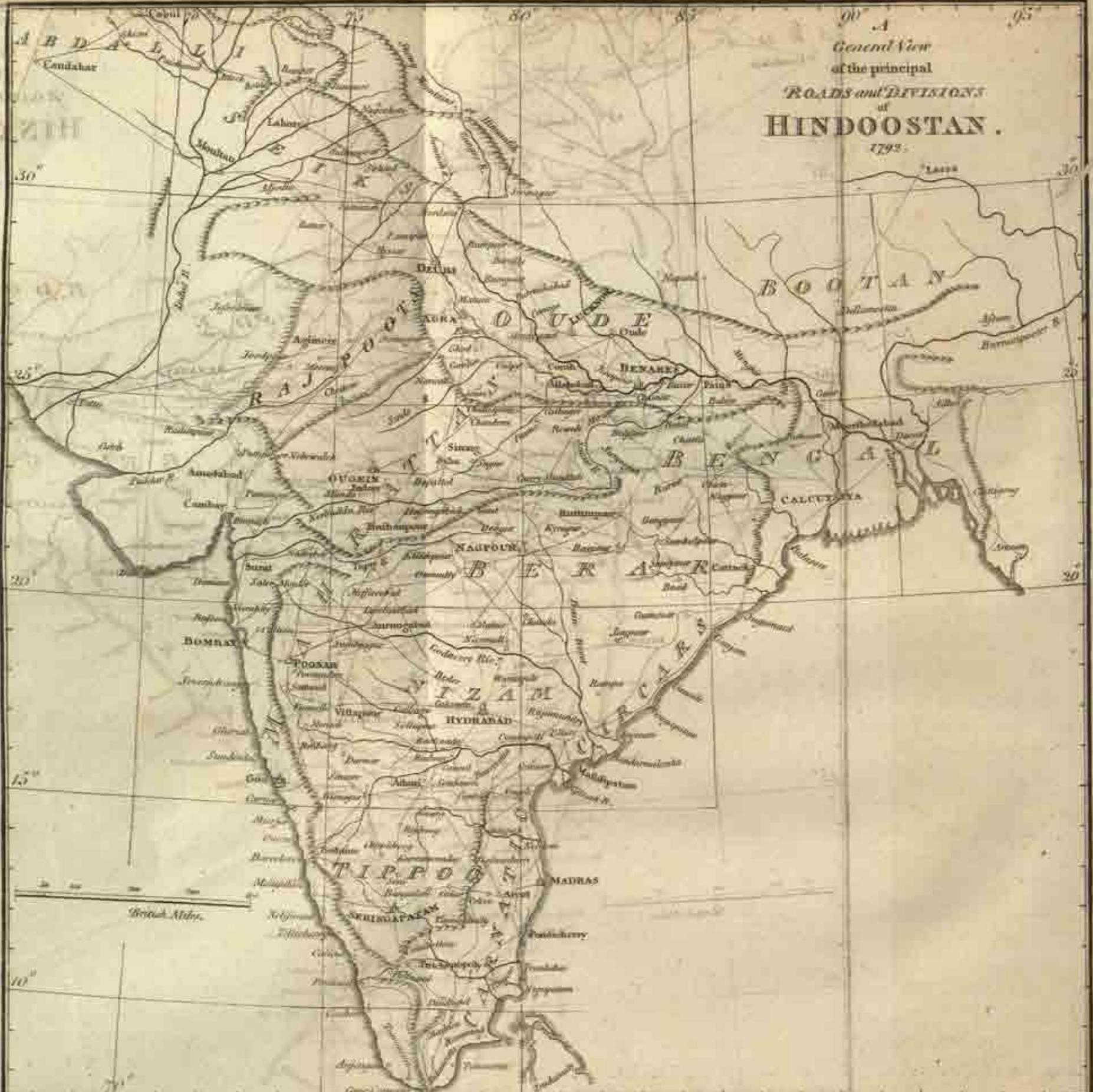
To sum up the whole information, collected from the different accounts of the upper part of the course of the Ganges, it appears that the two branches of it, which spring from the western side of mount Kentaisse, take their course westward, inclining considerably to the north, for a course of about 300 miles, in direct distance; when meeting the great chain or ridge of mount Himmaleh, which extends from Cabul along the north of Hindoostan, and through Thibet, the rivers are compelled to turn to the south; in which course they unite their waters, and form what is properly termed the river Ganges. This great body of water now forces a passage through the ridge of mount Himmaleh, at the distance, possibly, of 100 miles below the place of its first approach to it, and sapping its very foundations, rushes through a cavern, and precipitates itself into a vast basin which it has worn in the rock, at the hither foot of the mountains. The Ganges thus appears, to incurious spectators, to derive its original springs from this chain of mountains: and the mind of superstition has given to the mouth of the cavern, the form of the head of a cow; an animal held by the Hindoos, in a degree of veneration, almost equal to that, in which the Egyptians of old held their god Apis.

From this second source (as it may be termed) of the Ganges, its course becomes more eastwardly than before, through the rugged country of Sirinagur; until, at Hurdwar, it finally escapes from the mountainous tract, in which it has wandered for about 800 B. miles. At Hurdwar, it opens itself a passage through mount Sewalick; which is the chain of mountains that borders on the level country, on the north of the province of Delhi. Even Sewalick would be deemed a lofty ridge, but for the presence of mount Himmaleh, or *Imaus*; which rises above it, when viewed from the plains of Hindoostan.

It may truly be said that the knowledge of the origin of the Ganges was reserved for the present age: for it was so late as the year 1717, that the Emperor CAMBI, sent persons to explore it; and to bring some of its water back with them to Pekin; a journey of about 2500 B. miles from the head of the Ganges. Until the result of this expedition was known in Europe, it was believed, on the faith of the Hindoos, that the springs of the Ganges, were at the foot of mount Himmaleh.

A circumstance attending the courses of the Ganges and Burram-pooter rivers, in respect to each other, is remarkably singular. Issuing from opposite sides of the same ridge of mountains, they direct their courses towards opposite quarters, till they are more than 1200 miles asunder; and afterwards meet in one point near the sea, after each has performed a winding course of more than 2000 miles. Our ignorance of this circumstance, till so very lately, is a strong presumptive proof, that there yet remains a vast field - for improvement, in the geography of the eastern part of Asia.





90° A
General View
of the principal
ROADS and DIVISIONS
of
HINDOOSTAN.
1792.

SECTION VII.

TABLES OF DISTANCES IN HINDOOSTAN.

THE following tables, will, it is hoped, be particularly acceptable, not only to those, who for useful purposes may be desirous of calculating the time required for a courier or messenger to travel from one place to another, but also to those, who on the score of curiosity, or for the illustration of history, may wish to be informed of the distances between the principal towns in Hindoo-stan. This information cannot be obtained merely by the application of the compasses to the map, because the windings and inflections of the roads, are not there taken into the account: but an approximation towards it, may be obtained, by the double operation of measuring the distance on the map, and then applying to it, the rule given in page 7 of this Memoir.

To accomplish the task above proposed, I first selected the names of such cities and other places, as appeared likely to become objects of inquiry, in future; and in so extensive a country, no less than 168 such places occurred. To have given the distance between every two of these places respectively, would not only have extended the tables to an immoderate length (upwards of 14,000 distances occurring on the above number), but would have burdened the purchaser with much useless matter. For instance, although Jionpour has a political connection with Lucknow, and Tanjore with Madras; and it may be necessary that the distance of each of these subordinate places from its superior, should be given:

yet, as Jionpour and Tanjore stand in little or no relation to each other, it was of no use to give the distance between them. The same may be said of most of the other subordinate places.

The method, therefore, that I have followed, is this: I have chosen such places as appear to be of the greatest political consequence (such as the British presidencies, and the courts of the native princes), and of which I reckon 12; and considering them as centres, have formed for each, a separate table, in which the distance from the central place to every other place of note, whose situation may be supposed to become a matter of inquiry, is inserted; the names following in alphabetical order. A page is allotted to each of these central places, which are AGRA, BENARES, BOMBAY, CALCUTTA, DELHI, HYDRABAD, LUCKNOW, MADRAS, NAGPOUR, OUGEIN, POONAH, and SERINGAPATAM, and these also follow in the same order.

The tables contain near 1000 distances; and although these are reckoned only from 12 different points, yet by attending to the particulars of each table, a great many other distances may be found; as the communication between places, is usually by the medium of the capital towns that intervene (see page 6). For instance, the distance between Arcot and Allahabad may be collected from the tables of Hydrabad and Nagpour, as these places lie in the line of direction between the two former. Also, the distance between Patna and Aurungabad may be found by means of the Nagpour table: and that from Mirzapour to Surat, by subtracting the distance of the one from the other, in the Benares table. And by the same methods, the distances between most other places of note may be found. And in order to facilitate the search, and bring into one view, the respective positions of the several places mentioned in the tables, I have added a small map.

To avoid repeating the distances between the 12 central or primary places, through every table, they are inserted in that table, alone, whose name stands first in the alphabet. Thus the distance

between CALCUTTA and AGRA, will be found in the AGRA table, and not in that of Calcutta.

With respect to the distances themselves, it must not be expected that they are in general critically exact; for although the positions of eight out of the twelve primary places, are determined with some degree of precision; and three out of the four remaining ones, pretty nearly; yet the intermediate roads have, in few instances (those between Bengal and Delhi excepted) been measured. But since the publication of the first tables, the measured routes of Col. Pearse from Calcutta to Madras, Mr. Ewart's between Calcutta and Nagpore; and Mr. Pringle's tables of routes in the Carnatic; have come to hand: and the present tables will accordingly be found much improved. The deficiencies could only be supplied by the computed distances; which, however, appear to come as near the truth in India, as in any country whatever: or, where these have failed, by allowing such a degree of winding, as is found by experience to take place in a similar kind of country. The cos is always reckoned at one British mile and nine-tenths, in road measure. For other particulars respecting the length of the cos, and the windings of roads, the reader is desired to turn to the first pages of this Memoir.

The length of a day's journey in Hindooostan (as has been observed before) is from 11 to 12 cosses, or about 22 miles, for an ordinary traveller. But that of a courier, or professed messenger, may be reckoned at 30 or 33; and on occasions of emergency, they can travel even more; and that for a continuance of 15 or 20 days.

A regular post is established throughout the parts of Hindooostan subject to the East-India Company, and also from Calcutta to Madras. The postmen always travel on foot. Their stages are commonly from seven to eight miles; and their rate of travelling within our own districts, about 70 miles in the 24 hours

T A B L E I.

A G R A, to

	British Miles.		British Miles.	
Agimere	-	230	Hurdwar	217
Allahabad	-	296	Hydrabad by <i>Elichpour</i>	806
Amedabad	-	534	by <i>Nagpour</i>	835
Amednagar	-	713	Jagarnaut	793
Arcot	-	1160	Joinagur or <i>Jaepour</i>	136
Attock	-	755	Lahore	517
Aurungabad	-	633	Lucknow	202
Bareilly	-	129	Madras by <i>Elichpour</i>	1158
Beder	-	740	by <i>Nagpour</i>	1187
Benares	-	879	Masulipatam	831
Bisnagar	-	989	Meerta	294
Bombay by <i>Burbanpour</i>	-	848	Mirzapour	346
<i>by Amedabad</i>	-	858	Moorschedabad	826
Burhanpour	-	508	Moultan by <i>Delbi</i>	631
Cabul	-	976	Mundu	420
Calberga	-	865	Mysore	1238
Calcutta by <i>Moorschedabad</i>	-	944	Nagpour by <i>Hussingabad</i>	548
<i>by Birboom</i>	-	839	<i>by Chatterpour</i>	514
Calpy	-	160	Napaul	424
Cambay	-	587	Narwah	127
Candahar by <i>Cabul</i>	-	1208	Oude or <i>Fyzabad</i>	287
Canoge	-	127	Ougein by <i>Narwab</i>	374
Cashmere	-	724	Patna	544
Cattack	-	785	Pondicherry	1287
Chatterpour	-	212	Poonah	796
Cheitorre	-	300	Ramgaut	74
Corah	-	184	Rantampour	120
Dacca	-	990	Rutunpour	513
Delhi	-	137	Sattarah	840
Dowlatabad	-	628	Seringapatam	1230
Ellichpour	-	487	Sirong	253
Etayah	-	71	Sumbulpour	617
Fyzabad. <i>See Oude.</i>	-	1020	Surat by <i>Amedabad</i>	680
Goa	-	790	Tatta or <i>Sindy</i>	887
Golconda	-	80	Visiapour	825
Gwalior	-		Warangole	868

TABLE II.—BENARES to

	British Miles.		British Miles.
Agimere	571	Hydrabad	751
Allahabad	83	Jargarnaut	512
Amedabad	793	Jompour	42
Arcot	1105	Indore	581
Attock	1134	Joinagur or Jaepour	515
Aurungabad	740	Lahore	897
Balusore by Chuta Nagpour	316	Lucknow	189
Bareilly	345	Madras by Hydrabad	1103
Baroach	820	Masulipatam by Nagpour	853
Beder	726	Meerta	636
Bidjigur	56	Mindygant	253
Bilsah	416	Mirzapour	30
Bombay by Nagpour	982	Monghir	255
by Burbanpour	950	Moorshedabad by Birboom	417
Bopaltol	449	by Mongbir	477
Burhanpour by Sagur	609	Moultan	1010
Buxar	70	Mundlah	306
Cabul	1355	Mysore	1165
Calberga or Kilberga	783	Nagpour	430
Calcutta by Moorsbedabad	565	Napaul	280
by Birboom	460	Narwah	356
Calpy	239	Oude	130
Cambay	806	Ougein	554
Candahar	1588	Patna by Buxar	100
Canoge	259	by Davaadnagar	165
Cashmere	1104	Pawangur	754
Cattack by Chuta Nagpour	452	Pondicherry	1203
Chatterpour	237	Poonah by Nagpour	916
Cheitore	601	by Burbanpour	897
Chittigong	752	Ramgaut	419
Chunargur	17	Rewah	126
Corah	195	Rotasgur	81
Dacca	601	Ruttiumpour	275
Delhi	516	Sagur	341
Dowlatabad	742	Sattarah	942
Ellichpour	552	Seringapatam	1157
Etayah	808	Sindy or Tatta	1210
Furruckabad	295	Siron	389
Fyzabad. See Oude.		Sumbulpour	375
Ganjam	570	Surat by Siron and Ougein	863
Ghad or Gobud	336	by Burbanpour	869
Goa	1070	Tanjore by Nagpour	1273
Golconda	750	Tritchinopoly	1277
Gurrah	270	Visagapatam	758
Gwalior	355	Visiapour	876
Hurdwar	500		

TABLE III.—BOMBAY to

	British Miles.		British Miles.
Agimere by Amedabad	650	Jargarnaut	1052
Allahabad by Nagpour	977	Jansi	728
Amedabad	321	Jefselmere	680
Amednagar by Poonab	181	Indore by Pawangur	456
Anjenga	900	Joinagur or Jaepour	740
Arcot	722	Lahore	1070
Aurungabad by Callian	260	Lucknow	923
by Poonab	284	Madras	758
Baroach	221	Mangalore	518
Basscen	27	Masulipatam	686
Beder	426	Meerata	610
Bednure	452	Mirzapour	952
Bisnagur	398	Moorshedabad	1259
Bopaltal	516	Moultan by Jefselmere	950
Burhanpour by Poonab	386	Mundu	454
by Chandor	340	Mysore	630
Calberga	386	Nagpour by Poonab	577
Calcutta by Poonab	1301	by Callian	552
Callian	32	Narwah	721
Calpy	821	Onore	398
Cambay	281	Oude by Burbanpour and Sironge	1013
Canoge	889	Ougein by Pawangur	480
Cashmere	1277	by Burbanpour	500
Cattack	1034	Patna by Rewab	1145
Chatterpour	747	Pawangur	286
Cheitore	547	Pondicherry	805
Cochin	780	Poonah	98
Corah	853	Rutunpour	772
Damaun	107	Saler-Mouler	182
Delhi by Amedabad and Agimere	880	Sattarah	146
by Burbanpour	965	Seringapatam	622
Dowlatabad	258	Sindy or Tatta	741
Fyzabad. See Oude.		Strong	595
Goa	292	Sumbulpour	826
Golconda	475	Surat	177
Gwalior	768	Tellicherry	615
Husnagabad Gant	590	Visispour	234
Hydrabad	480	Vizrabuy or Vizarabie	48

TABLE IV.—CALCUTTA to

	British Miles.		British Miles.
Adoni	1030	Canoge by M.	824
Agimere by Moorsbedabad	1136	by B.	710
by Birboom	1030	Cashmere, Capital of, by M.	1668
Allahabad by M.	649	by B.	1564
by B.	544	Cuttack	451
Amedabad by Ougein	1234	Chatterpour by M.	803
Amednagar	1119	by B.	698
Anjenga	1577	Cheitore by M.	1168
Aracan	475	by B.	1063
Arcot	1070	Chittigong	317
AfSAM, Capital of	660	Chunargur by M.	574
Autock	1700	by B.	469
Ava	1150	Cicacole	490
Auringabad	1022	Comorin Cape	1470
Bahar	297	Condavir or Gunteor	791
Balasore	141	Corah by M.	760
Baroach by Nagpour	1220	by B.	655
Bareilly by M.	910	Dacca	177
by B.	805	Delhi by M.	1081
Bafseen by Poonab	1317	by B.	976
Beder	980	Dellamcotta	344
Bednore	1290	Dowlatabad	1020
Bilsah by Mundlab	867	Ellichpour	844
Bismagur	1120	Elore	719
Bopaltol by Mirzapoour	929	Etayah by M.	873
by Mundlab	892	by B.	768
Burhanpour by Nagpour	978	Furnuckabad by M.	860
Buxar by M.	485	by B.	755
by B.	408	Ganjam	369
Cabul by M.	1920	Gangpour	393
by B.	1815	Ghod or Gobud by M.	888
Calberga by the Circars	1018	by B.	783
Calpy by M.	804	Goa	1300
by B.	699	Golconda	997
Cambay by Nagpour	1273	Guntobur. See Condavir.	910
by Mundlab and Ougein	1253	Gwallor by M.	805
Candahar by Moorsbedabad	2152	by B.	
by Birboom	2047		

CALCUTTA to

	British Miles.		British Miles.
Hurdwar by M. by B.	1580 975	Ongole	819
Hussingabad Gant by Nagpour	909	Oude by Moorsbedabad and Benares	695
Hydrabad by Nagpour by the Circars	1043 904	by Birboom and Benares by Moorsbedabad and Azimgur	592
Jagarnaut	311		639
Indore by Mundlab	1030	by Birboom and Azimgur	593
Joinagur or Jaipour by M. by B.	1080 975	Ougein by Patna by Nagpour	1066 1062
Lahore by M. by B.	1461 1356	by Mundlab	997
Lafsa	850	Patna by M. by B.	400 340
Lucknow by M. by B.	754 649	Pawangur by Ougein	1197
Madras	1030	Pondicherry	1130
Madura	1336	Poonah by Nagpour	1228
Masulipatam	764	by the Circars	1289
Meera by M. by B.	1197 1092	Ramgant by M. by B.	984 879
Mindygant by M. by B.	818 713	Rajamundry	665
Mirzapour by M. by B.	598	Ruttunpour by Little Nagpour by Cattach	493 545
Monghir by M. by B.	493 301	Sagur by Mundlab	806
Moorshedabad	275	Sannaral by Nagpour	1232
Moulton by M. by B.	118 1585	Setingapatam	1170
Mundilla	634	Silhet	327
Mysore	1378	Sindy or Tatta *	1602
Nagpour, Great by Ruttunpour by Cattach	722 723	Strong by Benares	849
Nagpour, Little	280	Sumbulpour by Cattach	441
Napaul	591	by Little Nagpour	438
Narwah by M. by B.	922 817	Surat by Benares and Ougein by Nagpour	1309 1238
		Tanjore	1235
		Tritchinepoly	1238
		Visagapatam	557
		Visiapour by the Circars	1183
		by Aarungabad	1215

TABLE V.—DELHI to

	British Miles.		British Miles.
Agimere	230	Jagarnaut	910
Allahabad	414	Jonpour	456
Amedabad	610	Joinagur or Jaepour	156
Amednagar	830	Jummoo	418
Ariacan	1420	Lahore	380
Arcot	1277	Lucknow	279
Alsam	1348	Madras by Ellichpour	1295
Aucock	618	by Nagpour	1324
Aurungabad	750	by Burbanpour	1377
Bahar	642	Masulipatam	1084
Bareilly	112	Meerta	295
Beder	857	Mindygaut	280
Bisnagur	1106	Mirzapour	463
Burhanpour	625	Moorschedabad	943
Cabul by Rotas	839	Moultan	494
Calberga	982	Mysore	1330
Calpy	277	Mundu	481
Cambay	663	Nagpour	631
Candahar by Cabul	1071	Napaul	500
Canoge	214	Narwah	244
Cashmere by Laburz	587	Oude	370
Cattack	902	Ougein	440
Cheitore	327	Paishawur	663
Comorin Cape	1728	Panniput	72
Corah	301	Patna	661
Dacca	1157	Pondicherry	1400
Dowlatabad	745	Poonah	913
Ellichpour	604	Ramgaut	77
Etayah	188	Rutunpour	633
Fyzabad. See Oude.		Sattarah	975
Ghizni by Cabul	917	Seringapatam	1221
Goa	1158	Sindy or Tatta	810
Golconda	958	Sirhind	198
Gwalior	197	Siron	370
Hurdwar	117	Sumbulpour	730
Husun-Abdaul	584	Surat	756
Hydrabad by Ellichpour	923	Vissapour	916
by Nagpour	952	Warangole	985

TABLE VI.—HYDRABAD to

	British Miles.		British Miles.
Adoni	175	Jagarmaur	591
Agincere	800	Jansi	684
Allahabad	703	Indore	550
Amedabad	661	Ingeram	272
Amednagar	385	Joinagur or Jaepour	849
Arcot	354	Lahore	1369
Aurungabad	295	Lucknow	796
Balasore	761	Madras	351
Bancapour (Sanore)	267	Madura	613
Bangalore	352	Mahur or Moor	173
Baroach or Broach	549	Mangalore	470
Beder	78	Masulipatam	303
Bednore	413	Meerata	800
Bilzah	526	Mirzapour	722
Bissnagar	261	Moorshedabad	1020
Bopallol	495	Mundu	498
Burbampour by Jafferabad	380	Mysore	414
by Aurungabad	417	Nagpcour	321
Calberga	116	Narwah	679
Calpy	715	Neermul	344
Camhay	620	Omreanty	293
Canoul	127	Ongole	161
Cattack	651	Oude	811
Chatterpour	623	Ougein by Jafferabad	534
Cheatore	713	Patna by Nagpcour and Rewab	914
Chitteldroog	322	Pondicherry	452
Cicacole	413	Poensah	387
Combam or Comnum	345	Rachore	91
Condanore	456	Rajamundry	237
Condavir	331	Ruolconda	141
Condapilly	142	Roydroog	252
Corah	728	Rutunpour	551
Cuddispa	230	Sagur	536
Dalmacherry	278	Sattarah	309
Dowlatabad	203	Setingapatam	426
Ellichpour	319	Sundy or Tatta	1074
Elliore	183	Sitrong	533
Fyzabad. See Oude.		Sirripy	317
Gangam	533	Sollapour	144
Goa	416	Surat	575
Golconde	5	Tanjore	522
Gooty	178	Timercotta	71
Guntior. See Condavir		Tinevelly	709
Gurramconde	275	Tritchimopoly	546
Gurry-Mundah	476	Vesagapatam	355
Gwalior	726	Vizipour	269
Hussingabad Gant	444	Warangole	64
Jafferabad	303	Yunam	273

TABLE VII.—LUCKNOW to

	British Miles.		British Miles.
Agimere	428	Goorackpour	170
Altahabad	127	Gwalior	211
Amedabdal	770	Hurdwar	311
Arcot	147	Jagarnaut	660
Aurungabad	696	Jansi	190
Bahar	388	Jiounpour	147
Bahrainch	73	Indore	522
Bareilly	159	Jainagar or Jaepour	338
Baroach	761	Kairabad	81
Belgram	70	Lahore	639
Bilsah	367	Mahomedy	94
Bidziger	234	Masulipatam by Nagpour	897
Bopaltol	398	Meerta	493
Burhanpour	573	Mindygaut	69
Buxar	233	Mirzapour	189
Cabul	1118	Monghir	416
Callinger or Kowlinger	149	Moorshedabad	597
Calpy	98	Moultan	749
Canoge	75	Mundish	337
Cashmere	266	Nagpour	474
Cuttack	641	Narwali	258
Cawnpour	49	Oude or Fyzabad	83
Chandee	270	Orgein	495
Chatterpour	172	Patna	316
Cheitore	503	Pondicherry	1247
Chittigong	941	Proonah	882
Chunar	197	Ramgant	201
Corah	67	Rewah	182
Currah	93	Rotasgur	270
Dacca	790	Ruttipnpour	892
Dowlatabad	728	Sagur	300
Dynspour	304	Sittarah	920
Etayah	144	Seringapatam	1201
Furruckabad	211	Sindy or Tatta	1089
Fyzabad. <i>See Oude.</i>		Sireng	318
Ghod or Golbad	188	Sultampour	92
Geo	1115	Sumbulpour	497
Galconda	794	Visiapour	920

TABLE VIII.—MADRAS to

	British Miles.		British Miles.
Adoni	310	Guntoor. <i>See Condavir.</i>	
Agimere	1152	Guntamconda	153
Allahabad	1955	Gwalior	1078
Amedabad	1049	Jargarnaut	719
Anjenga	506	Indore	902
Arcot	73	Ingeram	399
Aurungabad	647	Lahore	1675
Balasore	689	Madura by Tanjore	307
Bancapour (Sanore)	416	Mangalore	449
Bandarmalanka	353	Masulipatam	292
Bangalore	215	Mirzapour	1974
Baroach	947	Moorshedabad	1148
Beder	430	Mundu	850
Bednore	415	Nagpour	673
Bishnugur	386	Negapatam	183
Burthapour by Aurungabad	769	Nellore	120
by Jaffierabad	732	Ouile	1163
Cabul	2134	Ougein	886
Calberga	422	Palamcottah	401
Cambay	998	Patna by Nagpour	1266
Canoge	1141	Pondicherry	100
Canoul	279	Poonah	660
Cashmere	1882	Rachore	323
Cattack	779	Rajamundry	365
Chatterpour	975	Raoconda	382
Chestore	1065	Rutunpour	903
Chitteldroog	335	Sattarah	616
Cicacole	540	Serringapatam	290
Colmbetore	306	Siccacollam	267
Comham or Commum	214	Sindy or Tatta	1467
Comorin Cape (Arameny Gate)	440	Sirong	905
Condapilly	306	Siripy	281
Condavir	276	Surat	903
Conjavaram	46	Tanjore	205
Corah	1080	Timercotta	278
Cuddapu	453	Trankebar	165
Dalmacherry	115	Travancore	464
Dindigul	275	Tritchinopoly	268
Dowlatabad	655	Tutacorin	804
Ellichpour	671	Velore	88
Ellore	310	Visagapatam	483
Ganjam	661	Visajpour	534
Goa	575	Watungole	444
Golconde	358	Yanam	400
Gooty or Gotti	269		

TABLE IX.—NAGPOUR to

	British Miles.		British Miles.
Adoni	496	Hussingabad	187
Allahabad	382	Jagarnaut	590
Amedabad	576	Indore	371
Amednagar	403	Joinagur or Jaepour	540
Arcot	675	Mahur or Maor	167
Aurungabad	300	Maullipatam	473
Balasore	594	Meerta	596
Bareilly	576	Mirzapour	401
Beder	302	Moorschedabad by Clatta Nag-pour	695
Bednore by Hyderabad	734	Mundilla	155
Bilsah	249	Nagpour Little	483
Bisnagar	569	Narnalia	164
Bead	347	Narwah by Hussingabad	421
Bopaltol	238	Neermul	177
Burhampour	256	Omsautty	113
Burwa	383	Oude or Fyzabad	490
Calberga	358	Ougein by Bopaltol	340
Calpy	394	Panniput	793
Canoge	486	Patna by Ruttunpour	677
Cauack	482	by Rewab	593
Chanda	90	Pondicherry	773
Chanderee	302	Poosh	486
Chatterpour	302	Rachore	412
Chittore	510	Rangaut	588
Chetra or Chittrab	463	Rangur in Babar	483
Chunargur	420	Rasypour	200
Cicacole	403	Rewah	304
Coudapilly	370	Rotasgur	440
Condavir or Gantoor	385	Ruttunpour	220
Coontah	93	Sagur	215
Corah	407	Sattarah	546
Cuddspa	551	Seringapatam	727
Dowlatabad	395	Siron by Hussingabad	295
Ellichipour	122	Sonepour or Jonepour	300
Ellore	377	Sumbulpour	494
Gangpour	330	Surat	516
Ganjam by Boad and Gumsoar	480	Surgoojah	318
Gawile or Gyulgur	137	Tajjore	843
Goa	640	Tritchinopoly	847
Golconda	320	Velore	670
Goaty or Gulli	500	Visagapatam	391
Gumsoar	434	Viniapour	448
Gurrah	160	Warangole	258
Gwallor by Hussingabad	480		

TABLE X.—OUGEIN to

	British Miles.		British Miles.
Agimere	256	Jansi	298
Allahabad	480	Jefschmere	365
Amedabad	275	Indore	38
Amednagar	365	Joinagur or Jaepour	285
Arcot	905	Joudypour	260
Aurungabad	287	Kotta	150
Baroach	266	Meceta	256
Bareilly	503	Mirzapour	526
Bafaeen	448	Moorshedabad by Gurry-Mund- lab	983
Bilsah	140	by Patna	1007
Bisnagar	645	Mundai	46
Bopatol	112	Mundilla	363
Burhanpour	154	Naderbar or Noondabar	203
Calpy	382	Nagore	305
Cambay	270	Nagpouri Little	780
Canoge	464	Narwah direct	254
Canack by Nagpour	822	by Sirong	291
Chanderec	242	Ouidipour	135
Chatterpour	320	Panna	726
Cheinore	169	Pondicherry	998
Corah	426	Poonah by Burbanpour	442
Dowlatabad	280	Powangur	200
Ellichpour	237	Ramgaut	488
Etayah	402	Rantampour	260
Furruckabad	468	Ruttiumpour	508
Fyzabad or Oude	583	Sagur	212
Ghod or Gobud	356	Sattarah	502
Goa by Paonab	697	Seringapatam	876
Golconda	539	Sirong	165
Gwalior	336	Sumbulpour	608
Hindia	116	Surat	309
Hussingabad Gaut	153	Vissapour	474
Jalore	220		

TABLE XI.—POONAH to

	British Miles.		British Miles.
Adoni	360	Hussingabad	450
Agimere	670	Gaut by Nagpour	986
Allahabad by Sirong	853	Jansi	674
Amedabad	389	Indore	450
Amednagur	83	Joinagur or Jaepour	737
Arcot	624	Mangalore	455
Aurungabad	186	Masulipatam	590
Balasore	1078	Mahur or Maor	355
Bancapour (Sanore)	268	Meerta	644
Bangalore	521	Mindygaut	844
Barcilly	910	Mirzapour by Sirong	900
Baroach	287	by Nagpour	887
Basseen	114	Moorshedabad by Nagpour	1181
Beder	310	Mundilla	641
Bednore	382	Mundu	406
Bilsalt	496	Naderbar	230
Bisnagur	300	Nagpour Little	919
Bopaliol	463	Narwah	669
Burhampour	288	Otnrautty	373
Calberga	271	Oude or Fyzabad	947
Callian	91	Panniput	985
Calpy	768	Patna by Sirong	1090
Cambay	338	by Nagpour	1063
Canoge	842	Pawangur	352
Canoul	387	Pondicherry	707
Cattack by Nagpour	968	Poorundar	18
Chanderee	620	Rachore	357
Chatterpour	695	Rangaut	870
Cheitore	570	Ruttunpour	706
Chitteldroog	411	Rydroog	386
Condavir or Guntoor	528	Sagur	556
Corah	812	Sattarah	63
Dalmacherry	548	Seringapatam	625
Dowlatabad	184	Siron	543
Ellichpour	380	Sumbulpour	778
Ellore	670	Surat	243
Etayah	779	Tanjore	762
Furruckabad	847	Tatta or Sindy	807
Ghud or Gobud	726	Tritchinopoly	730
Goa	245	Velore	616
Golconda	382	Visagapatam	742
Gooty or Guttii	392	Visiapour	136
Gwalior	716	Vizrabuy	112

TABLE XII.—SERINGAPATAM to

	British Miles.		British Miles.
Adoni	243	Golconda	408
Amednagur	541	Gooty or Gotti	228
Anjenga	325	Gurramconda	172
Arcot	217	Jagarnaut	860
Aurungabad	599	Madura	210
Bancapour (Sanore)	231	Mangalore	162
Bangalore	74	Masulipatam	430
Beder	432	Mysore	8
Bednore	187	Negapatam	296
Bisnagur	260	Ongole	338
Burhanpour	722	Onore	244
Calicut	129	Palamcotta	317
Calberga	390	Palicaudcherry	131
Canoul	279	Pondicherry	260
Changamah	178	Rachore	315
Chitteldroog	315	Raoconda	322
Cochin	214	Roydroog	168
Coimbettore	122	Sattarah	465
Combam or Commum	291	Sirripy	89
Comorin Cape	380	Sollapour	302
Condanore	250	Tanjore	237
Condapilly	444	Tellicherry	128
Condavir or Guntoor	414	Tinevelly. <i>See Palamcotta.</i>	
Cuddapa	220	Timerycotta	363
Dalmacherry	202	Trankebar	295
Dindigul	198	Travancore	344
Dowlatabad	606	Tritchinopoly	205
Ellichpour	695	Velore	202
Ellore	448	Visiapour	405
Goa	335		

A P P E N D I X.

ADVERTISEMENT.

THE within Tract has already made its appearance, in the Philosophical Transactions of 1781. It was suggested to the author, that it would make a very proper Appendix to the *MEMOIR OF THE MAP OF HINDOOSTAN*; and he accordingly offers it to the Public under that denomination: happy, should the Appendix meet a degree of indulgence, equal to what the Work itself has experienced.

AN
ACCOUNT
OF THE
GANGES
AND
BURRAMPOOTER RIVERS.

They gathering many a flood, and copious fed
With all the mellowed treasures of the sky,
Wind in progressive majesty along;
And traverse realms unknown, and blooming wilds,
And fruitful deserts—Forsaking these,
O'er peopled plains they fair-diffusive flow,
And many a nation feed, and circle safe,
Within their bosom many a happy isle.
Thus pouring on, they proudly seek the deep,
Whose vanquish'd tide, recoiling from the shock,
Yields to this liquid weight—

THOMSON'S SEASONS.

卷之三

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AN ACCOUNT, &c.

THE GANGES* and BURBAMFOOTER† rivers, together with their numerous branches and adjuncts, intersect the country of BENGAL (which, independent of BAHAR and ORISSA, is somewhat larger than GREAT BRITAIN) in such a variety of directions, as to form the most complete and easy inland navigation that can be conceived. So equally and admirably diffused are those natural canals, over a country that approaches nearly to a perfect plane, that, after excepting the lands contiguous to Burdwan, Birboom, &c. (which may be reckoned a sixth part of Bengal) we may safely pronounce, that every other part of the country, has, even in the dry season, some navigable stream within 25 miles at farthest; and more commonly, within a third part of that distance.

It is supposed, that this inland navigation gives constant employment to 30,000 boatmen. Nor will it be wondered at, when it is known, that all the salt, and a large proportion of the food, consumed by ten millions of people, are conveyed by water, within the kingdom of Bengal and its dependencies. To these must be added, the transport of the commercial exports and imports, probably to the amount of two millions sterling *per annum*; the interchange of manufactures and products, throughout the whole country; the fisheries; and the article of travelling.‡

* The proper name of this river in the language of Hindooostan (or Indostan), is *Pudda* or *Padda*. It is also named *Burra Ganga*, or the Great River; and *Gonga*, the River, by way of eminence; and from this, doubtless, the European names of the river are derived.

† The orthography of this word, as given here, is according to the common pronunciation in Bengal; but it is said to be written in the Shamscrit language, *Brabma-pooter*; which signifies the Son of *Brabma*.

‡ The embarkations made use of, vary in bulk from 180 tons down to the size of a wherry. Those from 30 to 50 tons are reckoned the most eligible for transporting merchandize.

These rivers, which a late ingenious gentleman aptly termed sisters and rivals (he might have said *twin* sisters, from the contiguity of their springs), exactly resemble each other, in length of course; in bulk, until they approach the sea; in the smoothness and colour of their waters; in the appearance of their borders and islands; and, finally, in the height to which their floods rise, with the periodical rains. Of the two, the Burrampooter is the largest; but the difference is not obvious to the eye. They are now well known to derive their sources from the vast mountains of THIBET;* from whence they proceed in opposite directions; the Ganges seeking the plains of HINDOOSTAN (or INDOSTAN) by the west; and the Burrampooter by the east; both pursuing the early part of their course through rugged vallies and defiles, and seldom visiting the habitations of men. The Ganges, after wandering about 800 miles through these mountainous regions, issues forth a deity to the superstitious, yet gladdened, inhabitant of Hindooostan, † From Hurdwar (or Hurdoar), in latitude 30°, where it gushes through an opening in the mountains, it flows with a smooth navigable stream through delightful plains, during the remainder of its course to the sea (which is about 1350 miles), diffusing plenty immediately by means of its living productions; and secondarily by enriching the

* These are among the highest of the mountains of the old hemisphere. I was not able to determine their height; but it may in some measure be gauged, by the circumstance of their rising considerably above the horizon, when viewed from the plains of Bengal, at the distance of 150 miles.

† The fabulous account of the origin of the Ganges (as communicated by my learned and ingenious friend, Sir CHARLES BOUGARTON ROUSE), is, that it flows out of the foot of Bescaw (the name with VERNON, the PRESERVING DEITY), from whence, say the Bramins, it has its name *Pudda*; that word signifying foot in the Shamscrit language: and that in its course to the plains of Hindooostan, it passes through an immense rock shaped like a cow's head.

The allegory is highly expressive of the veneration which the Hindoos have for this famous stream; and no less so of their gratitude to the Author of Nature for bestowing it: for it describes the blessing an flowing purely from his bounty and goodness.

The rock before mentioned has, I believe, never been visited by any European; and is even allowed by most of the natives to bear no resemblance to the object from whence it is denominated. However, as the effects of superstition do often long survive the illusions that gave it birth, the rock or cavern still preserves its original name. [This note was written before it was known that M. Tiefenthaler had visited it.]

adjacent lands, and affording an easy means of transport for the productions of its borders. In a military view, it opens a communication between the different posts, and serves in the capacity of a *military way* through the country; renders unnecessary the forming of magazines; and infinitely surpasses the celebrated inland navigation of North America, where the *carrying places* not only obstruct the progress of an army, but enable the adversary to determine his place and mode of attack with certainty.

In its course through the plains, it receives eleven rivers, some of which are equal to the Rhine, and none smaller than the Thames, besides as many others of lesser note. It is owing to this vast influx of streams, that the Ganges exceeds the Nile so greatly in point of magnitude, while the latter exceeds it in length of course by one-third. Indeed, the Ganges is inferior in this last respect, to many of the northern rivers of Asia; though I am inclined to think that it discharges as much or more water than any of them, because those rivers do not lie within the limits of the periodical rains.*

* The proportional lengths of course of some of the most noted rivers in the world are shown nearly by the following numbers:

European rivers.	
Thames	2
Rhine	5 $\frac{1}{2}$
Danube	7
Wolgs	9 $\frac{1}{2}$
Asiatic rivers.	
Indus (probably)	6 $\frac{1}{2}$
Euphrates	8 $\frac{1}{2}$
Ganges	9 $\frac{1}{2}$
Burrampooter	9 $\frac{1}{2}$
Nou Kian, or Ava river	9 $\frac{1}{2}$
Jennisea	10
Oby	10 $\frac{1}{2}$
Amoor	11
Lena	12 $\frac{1}{2}$
Homho (of China)	13 $\frac{1}{2}$
Kiao Ken (of illico)	15 $\frac{1}{2}$
African river.	
Nile	12 $\frac{1}{2}$
American rivers.	
Mississippi	8
Amazons	15 $\frac{1}{2}$

The bed of the Ganges is, as may be supposed, very unequal in point of width. From its first arrival in the plains at Hurdwar, to the conflux of the Jumnah (the first river of note that joins it), its bed is generally from a mile to a mile and a quarter wide; and, compared with the latter part of its course, tolerably straight. From hence, downward, its course becomes more winding, and its bed consequently wider,* till, having successively received the waters of the Gogra, Soane, and Gunduck, besides many smaller streams, its bed has attained its full width; although, during the remaining 600 miles of its course, it receives many other principal streams. Within this space it is, in the narrowest parts of its bed, half a mile wide, and in the widest, three miles; and that, in places where no islands intervene. The stream within this bed is always either increasing or decreasing, according to the season. When at its lowest (which happens in April), the principal channel varies from 400 yards to a mile and a quarter; but is commonly about three quarters of a mile, in width.

The Ganges is fordable in some places above the conflux of the Jumnah, but the navigation is never interrupted. Below that, the channel is of considerable depth, for the additional streams bring a greater accession of depth than width. At 500 miles from the sea, the channel is thirty feet deep when the river is at its lowest; and it continues at least this depth to the sea, where the sudden expansion of the stream deprives it of the force necessary to sweep away the bars of sand and mud thrown across it by the strong southerly winds; so that the principal branch of the Ganges cannot be entered by large vessels.

About 220 miles from the sea (but 300 reckoning the windings of the river), commences the head of the *delta* of the Ganges; which is considerably more than twice the area of that of the Nile.

* This will be explained when the windings of the river are treated of.

The two westernmost branches, named the Cossimbuzar and Jel-linghy rivers, unite, and form what is afterwards named the Hoogly river; which is the port of Calcutta, and the only branch of the Ganges that is commonly navigated by ships.* The Cos-simbuzar river is almost dry, from October to May: and the Jel-linghy river (although a stream runs in it the whole year) is in some years unnavigable during two or three of the driest months; so that the only subordinate branch of the Ganges, that is at all times navigable, is the Chundnah river, which separates at Mod-dapour, and terminates in the Hooringotta.

That part of the delta bordering on the sea, is composed of a labyrinth of rivers and creeks, all of which are salt, except those that immediately communicate with the principal arm of the Ganges. This tract, known by the name of the Woods, or *Sunderbunds*, is in extent equal to the principality of WALES; and is so completely enveloped in woods, and infested with tygers, that if any attempts have ever been made to clear it (as is reported), they have hitherto miscarried. Its numerous canals are so disposed, as to form a complete inland navigation, throughout and across the lower part of the delta; without either the delay of going round the head of it, or the hazard of putting to sea. Here salt, in quantities equal to the whole consumption of Bengal and its dependencies, is made and transported with equal facility: and here also is found an inexhaustible store of timber for boat-building. The breadth of the lower part of this delta is upwards of 180 miles; to which, if we add that of the two branches of the river

* The Hoogly river, or westernmost branch of the Ganges, has a much deeper outlet to the sea, than the principal branch. Probably this may be owing to its precipitating a less quantity of mud than the other; the quantity of the Ganges water discharged here being less than in the other, in the proportion of one to six. From the difficulties that occur in navigating the entrance of the Hoogly river, many are led to suppose, that the channels are shallow. The difficulties, however, arise from bringing the ships *across* some of the sand-banks, which project so far into the sea, that the channels between them cannot easily be traced from without.

that bound it, we shall have about 900 miles for the distance to which the Ganges expands its branches, at its junction with the sea.

It has been observed before, that the course of this river, from Hurdwar to the sea, is through an uniform plain; or, at least, what appears such to the eye: for the declivity is much too small to be perceptible. A section of the ground, parallel to one of its branches, in length 60 miles, was taken by order of Mr. HASTINGS; and it was found to have about nine inches descent in each mile, reckoning in a straight line, and allowance being made for the curvature of the earth. But the windings of the river were so great, as to reduce the declivity on which the water ran, to less than four inches *per* mile: and by a comparison of the velocity of the stream at the place of experiment, with that in other places, I have no reason to suppose, that its general descent exceeds it.*

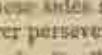
The mean rate of motion of the Ganges, is less than three miles an hour, in the dry months. In the wet season, and whilst the waters are draining off, from the inundated lands, the current runs from five to six miles an hour: and there are instances of its running seven, and even eight miles, in particular situations, and under certain circumstances. I have an experiment of my own on record, in which a boat was carried 56 miles in eight hours; and that against so strong a wind, that the boat had evidently no progressive motion through the water.

When we consider that the velocity of the stream is three miles in one season, and five or more in the other, on the same descent of four inches *per* mile; and, that the motion of the inundation is only half a mile *per* hour, on a much greater descent; no farther

* M. De Comparta found the descent of the river Amazon, in a straight course of about 1850 miles, to be about 1020 English feet, or 6*1*/₂ inches in a mile. If we allow for the windings (which in the Ganges are about one mile and $\frac{1}{3}$ in three, taking its whole course through the plains), it probably would not exceed 4 inches in a mile.

proof is required, how small the proportion of velocity is, that the descent communicates. It is then, to the *impetus* originating at the spring head, or at the place where adventitious waters are poured in, and successively communicated to every part of the stream, that we are principally to attribute the velocity; which is greater or lesser according to the quantity of water poured in.

In common, there is found on one side of the river an almost perpendicular bank, more or less elevated above the stream, according to the season, and with deep water near it: and on the opposite side, a bank, shelving away so gradually, as to occasion shallow water, at some distance from the margin. This is more particularly the case, in the most winding parts of the river, because the very operation of winding, produces the steep and shelving banks: * for the current is always strongest on the external side of the curve, formed by the serpentine course of the river; and its continual action on the banks, either undermines them, † or washes them down. In places where the current is remarkably rapid, or the soil uncommonly loose, such tracts of land are swept away in the course of one season, as would astonish those who have not been eye-witnesses to the magnitude and force of the mighty streams, occasioned by the periodical rains of the tropical regions. This necessarily produces a gradual change in the course of the river; the quantity lost on the one side, being added to the other, by the mere operation of the stream: for the fallen pieces of the bank, dissolve quickly into muddy sand; which is hurried away by the current, along the border of the channel, to the point, from whence the river turns off, to form the next reach; where the stream growing weak, it finds

* Hence it is, that the section of a river, that winds through a loose soil, approaches nearly to an obtuse angled triangle, one of whose sides is exceedingly short and disproportioned to the other two . But when a river perseveres in a straight course, the section becomes nearly the half of an ellipsis divided longitudinally . See Plate I. page 364.

† In the dry season some of these banks are more than 30 feet high, and often fall down in pieces of many tons weight, and occasion so sudden and violent an agitation of the water, as sometimes to sink large boats that happen to be near the shore.

a resting-place ; and helps to form a shelving bank, which commences at the point, and extends downwards, along the side of the succeeding reach.

To account for the slackness of the current at the point, it is necessary to observe, that the strongest part of it, instead of turning short round the point, preserves for some time, the direction given it by the last steep bank : and is accordingly thrown obliquely across the bed of the river to the bay on the opposite side ; and pursues its course along it, till the intervention of another point again obliges it to change sides. See Plate I.

In those few parts of the river that are straight, the banks undergo the least alteration,* as the current runs parallel to them ; but the least inflection of course, has the effect of throwing the current against the bank ; and if this happens in a part where the soil is composed of loose sand, it produces in time a serpentine winding.

It is evident, that the repeated additions made to the shelving bank before mentioned, become in time an encroachment on the channel of the river ; and this is again counter-balanced by the depredations made on the opposite steep bank, the fragments of which either bring about a repetition of the circumstances above recited, or form a bank or shallow in the midst of the channel. Thus a steep and a shelving bank, are alternately formed, in the crooked parts of the river (the steep one being the *indented* side, and the shelving one the *projecting*) ; and thus a continual fluctuation of course is induced in all the winding parts of the river ; each meander having a perpetual tendency to deviate more and more from the line of the general course of the river, by eating deeper into the bays, and at the same time adding to the points ; till either the opposite bays

* It is more than probable, that the straight parts owe their existence to the tenacity of the soil of which their banks are composed. Whatever the cause may be, the effect very clearly points out such situations, as the properest for placing towns in.

meet, or the stream breaks through the narrow isthmus, and restores a temporary straightness to the channel.

Several of the windings of the Ganges, and its branches, are fast approaching to this state; and in others, it actually exists at present. The experience of these changes, should operate against attempting canals of any length, in the higher parts of the country; and I much doubt, if any in the lower parts would long continue navigable. During eleven years of my residence in Bengal, the outlet or head of the Jellinghy river, was gradually removed three quarters of a mile farther down: and by two surveys of a part of the adjacent bank of the Ganges, taken about the distance of nine years from each other, it appeared that the breadth of an English mile and a half had been taken away. This is, however, the most rapid change that I have noticed; a mile in ten or twelve years being the usual rate of encroachment, in places where the current strikes with the greatest force; namely, where two straight reaches, meet at a small angle. In such situations, it not unfrequently excavates gulfs* of considerable length within the bank. These gulfs are in the direction of the strongest parts of the stream; and are in fact the *young shoots* (if I may so express myself) which in time strike out and become branches of the river: for we generally find them at those turnings that have the smallest angles. †

Two causes, widely different from each other, occasion the meandering courses of rivers: the one, the irregularity of the ground through which they run, which obliges them to wander in quest of a declivity; the other, the looseness of the soil, which yields

* The Count De Burros advises the digging of such gulfs in the banks of ordinary rivers, with a view to divert the current, when bridges or other buildings are endangered by it.

† The courses of these branches at the efflux, generally, if not always, become retrograde to the course of the river; for, a sand-bank, accumulating at the upper point of separation, gives an oblique direction, upwards, to the stream, which would otherwise run out at right-angles. This sand-bank being always on the increase, occasions a corrosion of the opposite bank; and by this means, all, or most of the outlets, have a progressive motion downwards; as has been remarked of the Jellinghy river.

to the friction of the border of the stream. The meanders in the first case, are, of course, as digressive and irregular as the surface they are projected on: but, in the latter, they are so far reducible to rule, that rivers of unequal bulk will, under similar circumstances, take a circuit to wind in, whose extent is in proportion to their respective breadths: for, I have observed, that when a branch of a river is fallen so low, as to occupy only a part of its bed, it no longer continues in the line of its old course; but works itself a new channel, which winds from side to side, across the former one. I have observed too, that in two streams, of equal size, that which has the slowest current has also the smallest windings: for as these (in the present case) are solely owing to the depredations made on the banks, by the force of the current; so the extent of these depredations, or, in other words, the dimensions of the windings, will be determined by the degree of force acting on the banks.

The windings of the Ganges in the plains, are, doubtless, owing to the looseness of the soil: and (I think) the proof of it is, that they are perpetually changing; which those, originally induced by an inequality of surface, can seldom, or never do.*

I can easily suppose, that if the Ganges was turned into a straight canal, cut through the ground it now traverses, in the most winding parts of its course; its straightness would be of short duration. Some yielding part of the bank, or that which happened to be the most strongly acted on, would first be corroded or dissolved: thus a bay or cavity would be formed, in the side of the bank. This begets an inflection of the current; which falling obliquely on the side of the bay, corrodes it incessantly. When the current has passed the innermost part of the bay, it receives a new direction, and

* It has been remarked, that the courses of rivers become more winding as they approach the sea. This, I believe, will only hold good, in such as take their course through a soil which has been formed from the depositions of their own waters. In the Ganges, and other rivers subject to considerable variations in the bulk of their streams, the best marks of the vicinity of the sea, are, the towns of the river banks, and the increasing muddiness of the shallows in its bed.

is thrown obliquely towards the opposite side of the canal, depositing in its way, the matter excavated from the bay; and which begins to form a shallow or bank, contiguous to the border of the canal. Here then is the origin of such windings, as owe their existence to the nature of the soil. The bay, so corroded, in time becomes large enough to give a new direction to the body of the canal: and the matter excavated from the bay, is so disposed as to assist in throwing the current against the opposite bank; where a process, similar to that I have been describing, will be begun.

The action of the current on the bank, will also have the effect of deepening the border of the channel near it; and this again increases the velocity of the current in that part. Thus would the canal gradually take a new form, till it became what the river now is. Even when the windings have lessened the descent one half, we still find the current too powerful for the banks to withstand it.

There are not wanting instances of a total change of course in some of the Bengal rivers.* The Cosa river (equal to the Rhine) once ran by Purneah, and joined the Ganges opposite Rajemal. Its junction is now 45 miles higher up. Gour, the ancient capital of Bengal, stood on the old bank of the Ganges: although its ruins are 4 or 5 miles from the present bank.

Appearances favour very strongly the opinion, that the Ganges had its former bed, in the tract now occupied by the lakes and morasses, between Nattore and Jaffergunge; striking out of its present course at Bauleah, and passing by Pootyah. With an equal degree of probability (favoured by tradition), we may trace its supposed course by Dacca, to a junction with the Burrampooter or Megna near Fringybazar; where the accumulation of two such mighty streams, probably scooped out the present amazing bed of the MEGNA. † See plate II.

* The Meotyyl lake is one of the windings of a former channel of the Cossimbazar river.
† Megna and Burrampooter are names belonging to the same river in different parts of its course. The Megna falls into the Burrampooter; and, though a much smaller river, communicates its name to the other during the rest of its course.

In tracing the sea coast of the delta, we find no less than eight openings ; each of which, without hesitation, one pronounces to have been in its time, the principal mouth of the Ganges. Nor is the occasional deviation of the principal branch, probably, the only cause of fluctuation, in the dimensions of the delta. One observes that the deltas of most capital rivers (the tropical ones particularly) encroach upon the sea. Now, is not this owing to the mud and sand brought down by the rivers, and gradually deposited, from the remotest ages, down to the present time? The rivers, we know, are loaded with mud and sand at their entrance into the sea ; and we also know, that the sea recovers its transparency, at the distance of twenty leagues from the coast : which can only arise from the waters having precipitated their earthy particles within that space. The sand and mud banks at this time, extend twenty miles off some of the islands, in the mouths of the Ganges and Burrampooter ; and rise in many places within a few feet of the surface. Some future generation will probably see these banks rise above water, and succeeding ones possess and cultivate them ! Next to earthquakes, perhaps the floods of the tropical rivers, produce the quickest alterations in the face of our globe. Extensive islands are formed in the channel of the Ganges, during an interval far short of that of a man's life ; so that the whole process is completed, in a period that falls within the compass of his observation.* Some of these islands, four or five miles in extent, are formed at the angular turnings of the river, and were originally large sand banks thrown up round the points (in the manner before described), but afterwards insulated by breaches of the river. Others are formed in the straight parts of the river, and in the middle of the stream ; and owe their origin to some obstruction lurking at the bottom. Whether this be the fragments of the river bank ; a large tree swept down from it ; or a sunken boat ; it is sufficient for a foundation : and a heap

* Accordingly, the laws respecting allusion are ascertained with great precision.

of sand is quickly collected below it. This accumulates amazingly fast: in the course of a few years, it peeps above water, and having now usurped a considerable portion of the channel, the river borrows on each side to supply the deficiency in its bed; and in such parts of the river we always find steep banks on both sides.* Each periodical flood brings an addition of matter to this growing island; increasing it in height as well as extension, until its top is perfectly on a level, with the banks that include it: and at that period of its growth, it has mould enough on it for the purposes of cultivation; which is owing to the mud left on it when the waters subside, and is indeed a part of the economy which nature observes, in fertilizing the lands in general.

While the river is forming new islands in one part, it is sweeping away old ones in other parts. In the progress of this destructive operation, we have opportunities of observing, by means of the sections of the falling bank; the regular distribution of the several *strata* of sand and earths, lying above one another in the order in which they decrease in gravity. As they can only owe this disposition to the agency of the stream that deposited them, it would appear, that these substances are suspended at different heights in the stream, according to their respective gravities. We never find a stratum of earth under one of sand; for the muddy particles float nearest the surface.† I have counted seven distinct strata in a section of one of these islands. Indeed, not only the islands, but most of the river banks wear the same appearance: for as the river is always changing its present bed, and verging towards the site of some former one, now obliterated, this must necessarily be the case.

* This evidently points out the means for preventing encroachments on a river bank in the straight parts of its course, viz. to remove the shallows that accumulate in the middle of its channel.

† A glass of water taken out of the Ganges, when at its height, yields about one part in four of mud. No wonder then that the subsiding waters should quickly form a stratum of earth; or that the delta should encroach upon the sea!

As a strong presumptive proof of the wandering of the Ganges, from the one side of the delta to the other, I must observe, that there is no appearance of *virgin* earth, between the Tiperah hills on the east, and the province of Burdwan on the west ; nor on the north till we arrive at Dacca and Bauleah. In all the sections of the numerous creeks and rivers in the delta, nothing appears but sand and black mould in regular strata, till we arrive at the clay, that forms the lower part of their beds. There is not any substance so coarse as gravel, either in the delta, or nearer the sea than 400 miles,* where a rocky point, a part of the base of the neighbouring hills, projects into the river : but in places remote from the great rivers, the soil is either red, yellow, or of a deep brown.

I come now to the particulars of the annual swelling and overflowing of the Ganges. †

It appears to owe its increase as much to the rain-water that falls in the mountains contiguous to its source, and to the sources of the great northern rivers that fall into it, as to that which falls in the plains of Hindoostan : for it rises fifteen feet and a half out of thirty-two (the sum total of its rising) by the latter end of June : and it is well known, that the rainy season does not begin in most of the flat countries, till about that time. In the mountains, it begins early in † April ; and by the latter end of that month, when the rain-water has reached Bengal, the rivers begin to rise ; though by very slow degrees : for the increase is only about an inch *per*

* At Oudamilla.

† An opinion has long prevailed, that the swelling of the Ganges, previous to the commencement of the rainy season in the flat countries, is in a great measure owing to the melting of the snow in the mountains. I will not go so far as totally to disallow the fact ; but can by no means suppose, that the quantity of snow-water bears any proportion to the increase of the river.

The vast collection of vapours, wafted from the sea by the southerly or south-west monsoon, are suddenly stopped by the lofty ridge of mountains that runs from east to west through Thibet. It is obvious, that the accumulation and condensation of these vapours, must first happen in the neighbourhood of the obstacle ; and successively in places more remote, as fresh supplies arrive to fill the atmosphere. Hence the priority of commencement of the rainy season, in places that lie nearest the mountains.

day, for the first fortnight. It then gradually augments to two and three inches, before any quantity of rain falls in the flat countries; and when the rain becomes general, the increase, at a medium, is five inches *per day*. By the latter end of July, all the lower parts of Bengal, contiguous to the Ganges and Burrampooter, are overflowed, and form an inundation of more than a hundred miles in width; nothing appearing but villages and trees, excepting very rarely, the top of an elevated spot (the artificial mound of some deserted village) appearing like an island.

The inundations in Bengal, differ from those in Egypt in this particular, that the Nile owes its floods *entirely* to the rain-water that falls in the mountains near its source; but the inundations in Bengal, are as much occasioned by the rain that falls there, as by the waters of the Ganges; and as a proof of it, the lands in general are overflowed to a considerable height, long before the bed of the river is filled. It must be remarked, that the ground adjacent to the river bank, to the extent of some miles, is considerably higher than the rest of the country,* and serves to separate the waters of the inundation, from those of the river, until it overflows. This high ground, is in some seasons, covered a foot or more; but the height of the inundation within, varies, of course, according to the irregularities of the ground; and is in some places twelve feet.

Even when the inundation becomes general, the river still shews itself, as well by the grafts and reeds on its banks, as by its rapid and muddy stream; for the water of the inundation acquires a blackish

All the rivers that are situated within the limits of the mousons, or shifting trade-winds, are subject to overflows at annually stated periods, like the Ganges: and these periods return during the season of the wind that brings vapours from the sea (which in Bengal, &c. is the southerly one), and this being periodical, the falls of rain must necessarily be so too.

The northerly wind, which blows only over the land, is dry; for no rain (except casual showers) falls during the continuance of that monsoon.

* This property of the bank is well accounted for by Count BURTON, who imputes it to the precipitation of mud, made by the waters of the river, when it overflows. The inundation, says he, purifies itself as it flows over the plain: so that the precipitation must be greatest on the parts nearest to the margin of the river.

hue, by having been so long stagnant, among grafts and other vegetables: nor does it ever lose this tinge, which is a proof of the predominancy of the rain-water over that of the river; as the slow rate of motion of the inundation (which does not exceed half a mile *per hour*) is of the remarkable flatness of the country.

There are particular tracts of lands, which, from the nature of their culture, and species of productions, require less moisture than others; and yet, by the lowness of their situation, would remain too long inundated, were they not guarded by dikes or dams, from so copious an inundation as would otherwise happen, from the great elevation of the surface of the river above them. These dikes are kept up at an enormous expence; and yet do not always succeed, for want of tenacity in the soil of which they are composed. It is calculated that the length of these dikes collectively, amounts to more than a thousand English miles. Some of them, at the base, are equal to the thicknesses of an ordinary rampart. One particular branch of the Ganges (navigable only during the rainy season, but then equal to the Thames at Chelsea), is conducted between two of these dikes, for about 70 miles: and when full, the passengers in the boats, look down on the adjacent country, as from an eminence.

During the swollen state of the river, the tide totally loses its effect of counteracting the stream; and in a great measure that of ebbing and flowing, except very near the sea. It is not uncommon for a strong wind, that blows up the river for any continuance, to swell the waters two feet above the ordinary level at that season: and such accidents have occasioned the loss of whole crops of rice.* A very tragical event happened at Luckipour † in 1763, by a strong gale

* The rice I speak of is of a particular kind; for the growth of its stalk keeps pace with the increase of the flood in ordinary times, but is destroyed by a too sudden rise of the water. The harvest is often reaped in boats. There is also a kind of grafts which overtops the flood in the same manner, and at a small distance has the appearance of a field of the richest verdure.

† About fifty miles from the sea.

of wind conspiring with a high spring tide, at a season when the periodical flood was within a foot and a half of its highest pitch. It is said that the waters rose six feet above the ordinary level. Certain it is, that the inhabitants of a considerable district, with their houses and cattle, were totally swept away; and, to aggravate their distress, it happened in a part of the country, which scarce produces a single tree, for a drowning man to escape to.

Embarkations of every kind traverse the inundation: those bound upwards, availing themselves of a direct course and still water, at a season when every stream rushes like a torrent. The wind, too, which at this season blows regularly from the south-east,* favours their progress; insomuch that a voyage, which takes up nine or ten days by the course of the river, when confined within its banks, is now effected in six. Husbandry and grazing are both suspended; and the peasant traverses in his boat, those fields which in another season he was wont to plow; happy that the elevated site of the river banks, places the herbage they contain, within his reach; otherwise his cattle must perish.

The following is a table of the gradual increase of the Ganges and its branches, according to observations made at Jellinghy and Dacca.

	At Jellinghy.		At Dacca.	
	Ft.	In.	Ft.	In.
In May it rose	6	0	2	4
June	9	6	4	6
July	12	6	5	6
In the first half of August	4	0	1	11
	<hr/>		<hr/>	
	32	0	14	3
	<hr/>		<hr/>	

* Although in the gulf or bay of Bengal the monsoon blows from the SSW and SW, yet in the eastern and northern parts of Bengal it blows from the S.E or E.S.E.

These observations were made in a season, when the waters rose rather higher than usual; so that we may take 31 feet for the mean of the increase.

It must be observed, that the Ganges rises in a more considerable degree than the northern rivers that communicate with it, in the lower parts of its course (the Burrampoote excepted); and this is evident by the different circumstances that take place on the mixing of the waters of the Ganges and Teesta rivers, in the different seasons. The Teesta is a large river which runs almost parallel to the Ganges, for near 150 miles. During the dry season, the waters of the Teesta run into those of the Ganges by two distinct channels, situated about twenty miles from each other; and a third channel at the same time discharges itself into the Megna. But during the season of the floods, the Ganges runs into the Teesta, whose outlet is then confined to the channel that communicates with the Megna. This alone is sufficient to shew how trifling the descent of these rivers must be, whose courses are thus regulated (not by the declivity of their beds, but) by their heights in respect to each other; which, like the flux and reflux of the tide, have the effect of giving contrary directions to the stream, at different seasons.

The inundation is nearly at a stand for some days preceding the middle of August, when it begins to run off; for although great quantities of rain fall in the flat countries, during August and September, yet, by a partial cessation of the rains in the mountains, there happens a deficiency in the supplies necessary to keep up the inundation.* The quantity of the daily decrease of the river is nearly in the following proportion; during the latter half of August, and all September, from three to four inches; from September

* I have stated the middle of August for the period when the waters begin to run off; and in general it happens with as much regularity as the vicissitudes of the seasons do. But there are exceptions to it; for in the year 1774 the rivers kept up for near a month after the usual time.

to the end of November, it gradually lessens from three inches to an inch and a half; and from November, to the latter end of April, it is only half an inch *per day* at a medium. These proportions must be understood to relate to such parts of the river as are removed from the influence of the tides; of which more will be said presently. The decrease of the inundation does not always keep pace with that of the river, by reason of the height of the banks; but after the beginning of October, when the rain has nearly ceased, the remainder of the inundation goes off quickly by evaporation; leaving the lands highly manured, and in a state fit to receive the seed, after the simple operation of plowing.

There is a circumstance attending the increase of the Ganges, and which, I believe, is little known or attended to; because few people have made experiments on the heights, to which the periodical flood rises, in different places. The circumstance I allude to, is, the difference of the quantity of the increase (as expressed in the foregoing table) in places more or less remote from the sea. It is a fact, confirmed by repeated experiments, that from about the place where the tide commences, to the sea, the height of the periodical increase diminishes gradually, until it totally disappears at the point of confluence. Indeed, this is perfectly conformable to the known laws of fluids: the ocean preserves the same level at all seasons (under similar circumstances of tide), and necessarily influences the level of all the waters that communicate with it, unless precipitated in the form of a cataract. Could we suppose, for a moment, that the increased column of water, of 31 feet perpendicular, was continued all the way to the sea, by some preternatural agency: whenever that agency was removed, the head of the column would diffuse itself over the ocean, and the remaining part would follow, from as far back as the influence of the ocean extended; forming a slope, whose perpendicular height would be 31 feet. This is the precise state in which we find it. At the point of junction with the

sea, the height is the same in both seasons, at equal times of the tide. At Luckipour, there is a difference of about six feet between the heights in the different seasons; at Dacca, and places adjacent, 14; and at Custee, 31 feet. Here then is a regular slope; for the distances between the places, bear a proportion to the respective heights. This slope must add to the rapidity of the stream; for, supposing the descent to have been originally four inches *per mile*, this will increase it to about five and a half. Custee is about 240 miles from the sea, by the course of the river; and the surface of the river there, during the dry season, is about 80 feet above the level of the sea at high water.* Thus far does the ocean manifest its dominion in both seasons: in the one by the ebbing and flowing of its tides; and in the other by depressing the periodical flood, till the surface of it coincides as nearly with its own, as the descent of the channel of the river will admit. †

Similar circumstances take place in the Jellinghy, Hoogly, and Burrampooter rivers; and, I suppose, in all others that are subject either to periodical, or occasional swellings.

Not only does the flood diminish near the sea, but the river banks diminish in the same proportion; so that in the dry season, the height of the periodical flood may be known by that of the bank.

I am aware of an objection that may be made to the above solution; which is, that the lowness of the banks in places near the sea, is the true reason why the floods do not attain so considerable

* The tides in the river Amazons are perceptible at 600 miles above its mouth; but at an elevation of only 90 feet, according to M. De CONDAMINE. It remains to be told what the state of the river was, at the time of making the experiment; because the land-floods have the effect of shortening the limits of the tide's way.

† The Count De BUROS has slightly mentioned this circumstance attending the swelling of rivers; but imputes it to the increased velocity of the current, as the river approaches the sea: which, says he, carries off the inundation so quick, as to abate its height. Now (with the utmost deference to so great an authority) I could never perceive, that the current, either in the Ganges, or any other river, was stronger near the sea than at a distance from it. Even if we admit an acceleration of the current during the ebb-tide, the flux retards it in so considerable a degree, as at least to counterbalance the effects produced by the temporary increase of velocity.

a height, as in places farther removed from it, and where the banks are high ; for that the river, wanting a bank to confine it, diffuses itself over the surface of the country. In answer to this, I shall observe, that it is proved by experiment, that at any given time, the quantity of the increase in different places, bears a just proportion to the sum total of the increase in each place respectively : or, in other words, that when the river has risen three feet at Dacca, where the whole rising is about 14 feet ; it will have rose upwards of six feet and a half at Custee, where it rises 91 feet in all.

The quantity of water discharged by the Ganges, in one second of time, during the dry season, is 80,000 cubic feet ; but the river, when full, having thrice the volume of water in it, that it had at the time when the experiment was made ; and its motion being also accelerated in the proportion of five to three ; the quantity discharged in a second at that season is 405,000 cubic feet. If we take the medium the whole year through, it will be nearly 180,000 cubic feet in a second.

THE BURRAMPOOTER, which has its source from the opposite side of the same mountains that give rise to the Ganges, first takes its course eastward, or directly opposite to that of the Ganges, through the country of Thibet, where it is named *Sanpoo* or *Zanciu*, which bears the same interpretation as the *Gonga* of Hindoostan ; namely, THE RIVER. The course of it through Thibet, as given by Father DU HALDE, and formed into a map by M. D'ANVILLE, though sufficiently exact for the purposes of general geography, is not particular enough to ascertain the precise length of its course. After winding with a rapid current through Thibet, it washes the

border of the territory of Lassa (in which is the residence of the Grand Lama) and then deviating from an east to a south-east course, it approaches within 220 miles of Yunan, the westernmost province of China. Here it appears, as if undetermined whether to attempt a passage to the sea, by the gulf of Siam, or by that of Bengal; but seemingly determining on the latter, it turns suddenly to the west through Afsam, and enters Bengal on the north-east. I have not been able to learn the exact place where it changes its name; but as the people of Afsam call it Burrampoot, it would appear, that it takes this name on its entering Afsam. After its entry into Bengal, it makes a circuit round the western point of the Garrow mountains; and then, altering its course to south, it meets the Ganges about 40 miles from the sea.

Father DU HALDE expresses his doubts concerning the course that the Sanpoo takes, after leaving Thibet; and only supposes generally, that it falls into the gulf of Bengal. M. D'ANVILLE, his geographer, not without reason, supposed the Sanpoo and Ava river to be the same; being justified by the information which his materials afforded him: for the Burrampooter was represented to him, as one of the inferior streams that contributed its waters to the Ganges, and not as its equal or superior; and this was sufficient to direct his researches, after the mouth of the Sanpoo river, to some other quarter. The Ava river, as well from its bulk, as the bent of its course for some hundred miles above its mouth, appeared to him to be a continuation of the river in question: and it was accordingly described as such in his maps, the authority of which was justly esteemed as decisive; and, till the year 1765, the Burrampooter, as a capital river, was unknown in Europe.

On tracing this river in 1765, I was no less surprised, at finding it rather larger than the Ganges, than at its course previous to its entering Bengal. This I found to be from the east; although all the former accounts represented it as from the north: and this un-

expected discovery soon led to inquiries, which furnished me with an account of its general course, to within 100 miles of the place where DU HALDE left the Sanpoo. I could no longer doubt, that the Burrampooter and Sanpoo were one and the same river: and to this was added the positive assurances of the Assamers, " That *their* river came from the north-west, through the Bootan mountains." And to place it beyond a doubt, that the Sanpoo river is not the same with the river of Ava, but that this last is the great *Nou Kian* of Yunan; I have in my possession a manuscript draught of the Ava river, to within 150 miles of the place where DU HALDE leaves the Nou Kian, in its course towards Ava; together with very authentic information that this river (named *Irabatty* by the people of Ava) is navigable from the city of Ava into the province of Yunan in China.*

The Burrampooter, during a course of 400 miles through Bengal, bears so intimate a resemblance to the Ganges, except in one particular, that one description may serve for both. The exception I mean, is, that during the last 60 miles, before its junction with the Ganges, it forms a stream which is regularly from four to five miles wide; and but for its freshness might pass for an arm of the sea. Common description fails in an attempt to convey an adequate idea of the grandeur of this magnificent object; for,

— Scarce the muse

Dares stretch her wing o'er this enormous mass
Of rushing water; to whose dread expanse,
Continuous depth, and wond'rous length of course,
Our floods are rills —————

THOMSON'S SEASONS.

* My information comes from a person who had resided at Ava. See the Memoir, page 296, and also the Modern Universal History, Vol. VI. page 205.

I have already endeavoured to account for the singular breadth of the Megna, by supposing that the Ganges once joined it where the Ixsamutty now does; and that their joint waters scooped out its present bed. The present junction of these two mighty rivers below Luckipour, produces a body of running fresh water, hardly to be equalled in the old hemisphere; and, perhaps, not exceeded in the new. It now forms a gulf interspersed with islands, some of which rival, in size and fertility, our Isle of Wight. The water at ordinary times is hardly brackish at the extremities of these islands; and, in the rainy season, the sea (or at least the surface of it) is perfectly fresh to the distance of many leagues out.

The *bore* (which is known to be a sudden and abrupt influx of the tide, into a river or narrow strait) prevails in the principal branches of the Ganges, and in the Megna; but the Hoogly river, and the passages between the islands and sands situated in the gulf, formed by the confluence of the Ganges and Megna, are more subject to it than the other rivers. This may be owing, partly, to their having greater *embouchures* in proportion to their channels, than the others have; by which means, a larger proportion of tide, is forced through a passage comparatively smaller; and partly, to there being no capital openings near them, to draw-off any considerable portion of the accumulating tide. In the Hoogly or Calcutta river, the *bore* commences at Hoogly Point (the place where the river first contracts itself), and is perceptible above Hoogly town; and so quick is its motion, that it hardly employs four hours in travelling from one to the other, although the distance is near 70 miles. At Calcutta it sometimes occasions an instantaneous rise of five feet: and both here, and in every other part of its track, the boats, on its approach, immediately quit the shore, and make for safety to the middle of the river.

In the channels, between the islands in the mouth of the Megna, &c. the height of the *bore* is said to exceed twelve feet; and is so

terrific in its appearance, and dangerous in its consequences, that no boat will venture to pass at spring tide. After the tide is fairly past the islands, no vestige of a *bore* is seen, which may be owing to the great width of the Megna, in comparison with the passages between the islands; but the effects of it are visible enough, by the sudden rising of the tides.

THE rivers are in a tranquil state, from the time of the change of the monsoon in October, to the middle of March; when the *northwesters* begin in the eastern parts of BENGAL (though later as we advance westwards) and may be expected once in three or four days, until the commencement of the rainy season. These *northwesters*, which have their denomination from the quarter they usually originate in, are the most formidable enemies that are met with, in this inland navigation; they being sudden and violent squalls of wind and rain; and though of no long duration, are often attended with fatal effects, if not carefully guarded against; whole fleets of trading boats having been sunk by them almost instantaneously. They are more frequent in the eastern, than in the western part of BENGAL; and happen oftener towards the close of the day, than at any other time. As they are indicated some hours before they arrive, by the rising and very singular appearance of the clouds, the traveller has commonly time enough to seek a place of shelter. It is in the great rivers alone, that they are so truly formidable: and that about the latter end of May, and beginning of June, when the rivers are much increased in width.

After the commencement of the rainy season (which period varies in different parts, from the middle, to the end of June) tempestuous weather must be occasionally expected. Places of shelter are more

common at this season, than at any other, by the filling of the creeks and inlets, as the river increases: and, on the other hand, the bad weather, when it happens, is of longer continuance than during the season of the northwester. The rivers being now spread to the breadth of several miles, a strong wind has the power of raising large waves on them, and particularly when blowing in a contrary direction to the rapid parts of the stream; which at such times should be avoided, as much from motives of conveniency, as of safety.

During the long interval between the end of the rainy season, and the beginning of the northwester, one proceeds in security with respect to weather, and has only to observe a common degree of attention to the piloting the boat clear of shallows, and stumps of trees. These will generally be avoided by keeping nearest to the side that has the steep bank; but not so near, as to be within the verge of its inferior slope. This steep bank (see page 341) has the deepest water, and the strongest current near it; and is therefore, on both accounts, the proper side to keep on, when going down with the stream; as its rate of motion must principally determine that of the boat; for the motion acquired by the oars of a large *budgerow** hardly exceeds 8 miles a day, at ordinary times.

From the beginning of November to the middle or latter end of May, the usual rate of going *with* the stream, is forty miles in a day of 12 hours; and during the rest of the year, from 50 to 70 miles. The current is strongest while the waters of the inundation are draining off; which happens in part of August and September.

In many of the shallow rivers, the current is exceedingly slow during the dry months; insomuch, that the track-rope is frequently used, in going downwards.

* A travelling boat, constructed somewhat like a pleasure-*barge*. Some have cabin 14 feet wide, and proportionably long; and draw from 4 to 5 feet water.

In towing *against* the stream, the steep side is also generally preferred, on account of the depth of water; although the current runs so much stronger there, than on the opposite side. On these occasions, one ought to be provided with a very long track-rope, as well to avoid the falling pieces of the steep bank on the one side, as the shallow water on the other; when it becomes necessary to change sides, through the badness of the tracking-ground. The anchor should always be kept ready for dropping, in case the track-rope breaks.

Seventeen, to twenty miles a day, according to the ground, and the number of impediments, is the greatest distance that a large budgerow can be towed against the stream, during the fair season; and to accomplish this, the boat must be drawn at the rate of four miles and a half *per* hour, through the water, for 12 hours. When the waters are high, a greater progres will be made, notwithstanding the increased velocity of the current; because the filling of the river-bed gives many opportunities of cutting off angles and turnings; and sometimes even large windings, by going through creeks. And as the wind at this season, blows upwards in most of the rivers, opportunities of using the sail, frequently occur.

In the very singular navigation across the *Jeels*, or inundation, between Dacca and Nattore, &c. in which 100 miles or more, are sailed on nearly a straight course, leaving the villages and groves to the right and left; little difficulty occurs, unless the wind should fail: for while it continues to blow, it is always fair, during the season of the inundation. The current presents only a trifling obstacle; since its motion (which is nearly parallel to the course of the Ganges) is seldom half a mile per hour.

The season of the *northwesters*, is, above all others, that which requires the most attention and care. Should one of those squalls approach, and no creek or inlet offer for shelter, when in the wide rivers; the steep bank, if not in a *crumbling** state, should always be

* See page 341, and the second note in the same page.

preferred to the flat one, whether it lie to windward or leeward. If the bank be in a crumbling state, a retreat to a firm part of it (which is most likely to be found in the straightest parts of the river) should be attempted. But if this cannot be done, the flat side must be taken up with ; and if it be a *lee-shore*, the anchor should be thrown out to prevent driving on it. In these cases the mast is always supposed to be struck ; and provided this be done, and the cargo judiciously disposed, it is probable that a well-constructed budgerow will be in no danger of oversetting by the mere force of the wind alone : although by an unfortunate, or an ill-chosen situation, it may be so much exposed to the waves, as to be filled and sunk by them. At this season, every traveller should be particularly attentive to the nature of the river-bank, as well as to the appearance of the horizon, during the last hours of the afternoon ; and if he finds a place of shelter, he should stop for the night : and not hesitate about losing time, which may be retrieved the next morning, by setting out so much earlier. The boatmen work with much more alacrity on this plan ; because they have day-light before them to secure their boat, provide fuel, and dress and eat their provisions.

As the water is always either rising or falling within the beds of the rivers, it is impossible for a map to assign precisely where a place of shelter shall be found, at any given time. Thus much, however, may be concluded, that in a place where the junction of two considerable channels is effected when the rivers are up, there will be an inlet, or deep bay, throughout the dry season, although one of the channels should be dried up. The waters (as we have said before) are rising from the latter end of April, to the middle of August : and falling during the rest of the year.

The navigation through THE Woods, or SUNDERBUNDS, is effected chiefly by means of the tide. In the large rivers, or those which communicate immediately with the sea, the circumstances of the tide are more analogous to the ordinary course of it, than in the

small lateral channels which serve to connect the great rivers together. Thus, in two rivers of equal bed, and parallel course, the tide will at any time, flow in the same direction, in both: but if they happen to be united by a lateral or cross canal, the flood tide will enter that opening of the canal which lies nearest to the sea, and run through it into the other river; and the ebb tide *vice versa.* But as the arrival of the tide depends on the capacity and formation of the rivers, as well as on the absolute distance it has to run; it will not be an easy matter to determine its direction at any given time, even with the help of a map.

There are two distinct passages through the Sunderbunds, the one named the southern, or SUNDERBUND PASSAGE, the other the BALIAGOT PASSAGE. The first is the farthest about, and leads through the deepest and widest rivers; and is of course, the most exposed during tempestuous weather. It opens into the Calcutta river, through Channel-creek*, about 65 miles below the town. The Baliagot Passage opens into a lake on the east side of Calcutta; from whence, within a very few years, a small canal has been cut, to join the lake with the river.

These passages present to the imagination, both a grand and a curious spectacle: a navigation of more than 200 miles through a forest, divided into numberless islands by a continued labyrinth of channels, so various in point of width, that a vessel has at one time her masts almost entangled in the trees; and at another, sails uninterruptedly on a capacious river, beautifully skirted with woods, and affording a vista of many miles each way. The water is every where salt; and the whole extent of the forest abandoned to wild beasts: so that the shore is seldom visited but in cases of necessity; except by the wood-cutters and salt-makers; whose "dreadful" "trade" is exercised at the constant peril of their lives; for the tygers not only appear on the margin in quest of prey, but often, in the

* A part of this creek forms the place known of late by the name of NEW HARBOUR.

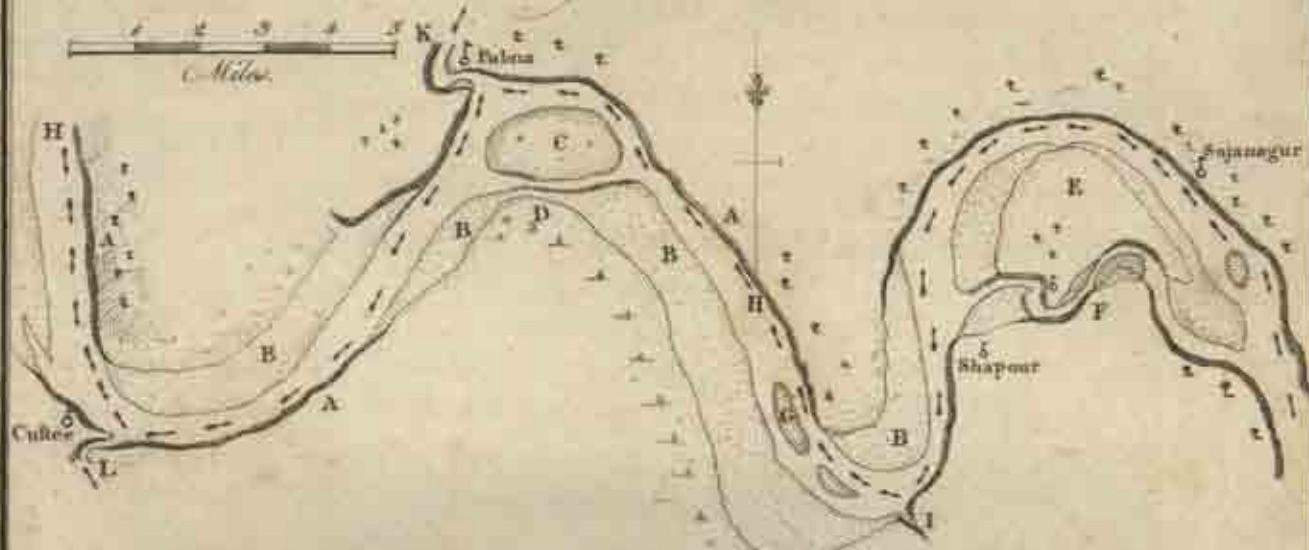
night time, swim to the boats that lie at anchor in the middle of the river.

These passages are used during the whole year, by those who go to and from, the lower parts of the Ganges, and Calcutta, &c. and during the season when the western branch of the Ganges is almost dried up, the whole trade of Bengal (the western provinces excepted) passes either by Channel-creek, or Baliagot, but chiefly by the former; some articles of the Company's cargoes being brought more than 900 miles by water, at this season.

EXPLANATION OF PLATE, N^o. I.

- A. A. A. Steep banks, corroded by the current; the fragments of which are deposited, and form the banks B. B. B.
- C. A sand-bank, accumulating to an island. This once joined to D; till insulated by a breach of the river.
- E. An island formed and inhabited. This also was a sand-bank, thrown up round the point F.
- G. An island accumulating in the midst of the channel.
- H. The line of the strongest current.
- I. A gulf occasioned by the force of the current, from the opposite side, striking against the bank: the origin of a future branch issuing from the great river. In a course of time, the first reach of it becomes retrograde to the course of the river (see note, page 343) as at K and L.
- N. B. The section of the branch of the Ganges is exactly similar to that of the Ganges itself, except in the article of width.

PLAN of part of the Course of the GANGES, to explain the nature of the steep and shelving Banks, Islands &c.



SECTION of a Branch of the GANGES, as a further explanation of the steep and shelving Banks.



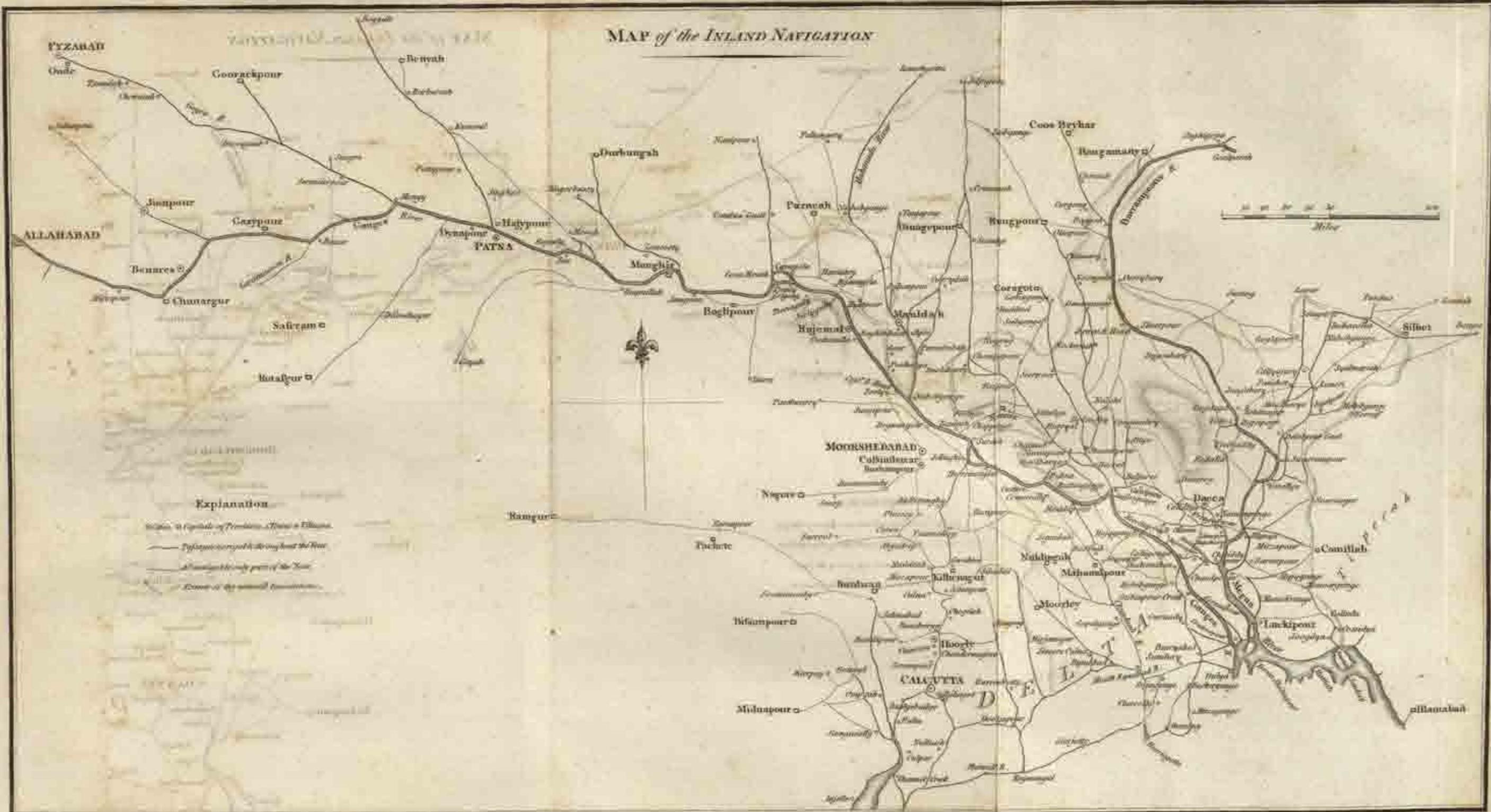
Published according to Act of Parliament June 20th 1770.

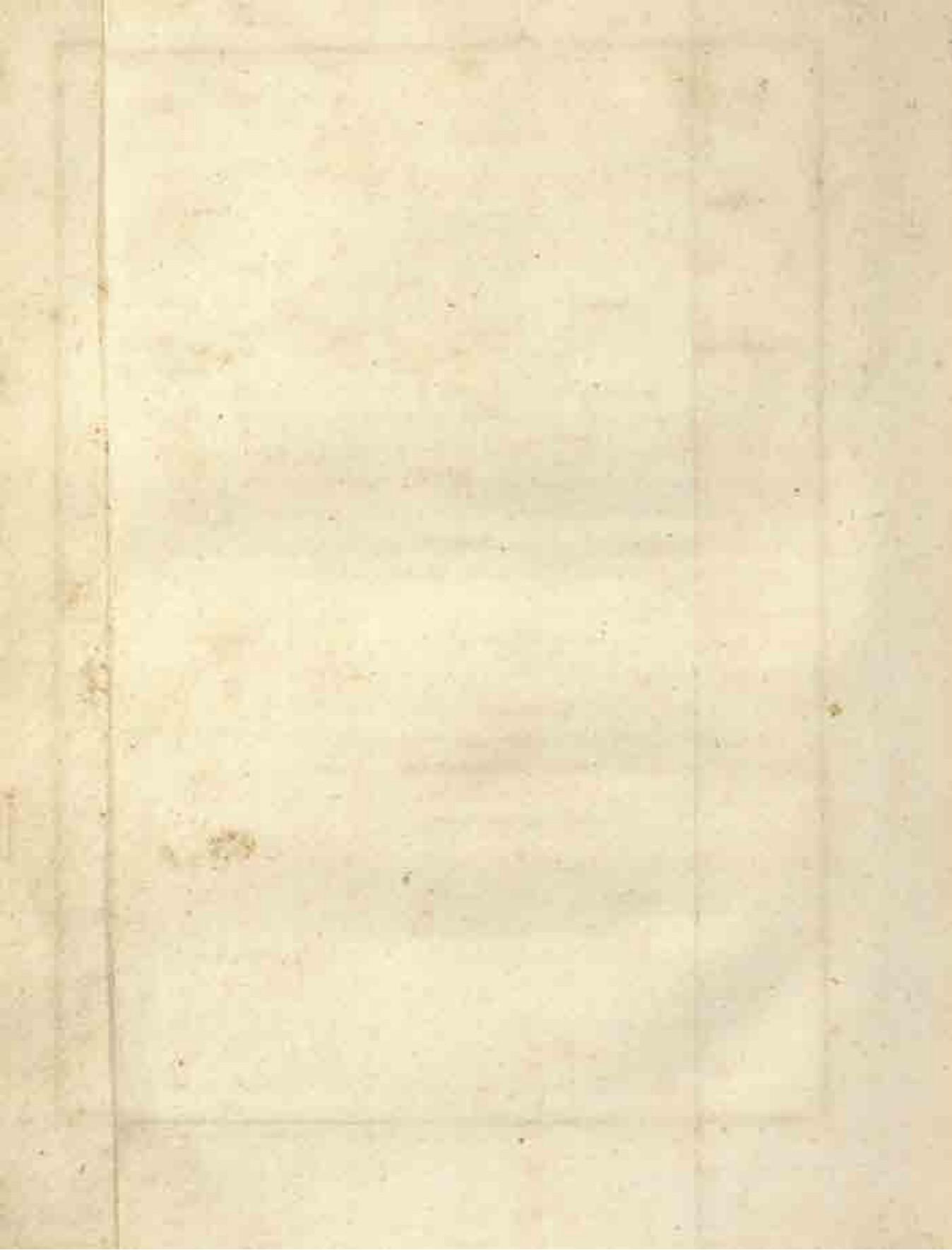


MAP of the INLAND NAVIGATION

Explanation

- Writings of Franklin, Jefferson & Eliot*
— *Differences existing throughout the States*
— *American history prior to the War*
— *Course of the several Presidents*





ADDENDA.

I. FATE of the GREAT MOGUL : and the Progress of MADAJEE SINDIA.

[Refers to pages lxxxvii, and cxxviii, of the Introduction.]

AFTER the first edition of the Memoir was printed, and before it was published (in 1788), accounts from India informed us, that Sindia had been defeated by the confederated Rajpoots, on the side of Jyenagur and Joodypour: and that in consequence, he had retreated southward to Gwalior. They added, moreover, that the nominal Mogul, Shah Aulum, had taken the opportunity of escaping from Sindia's camp, to the Rohilla chief of Sehaurun-pour.

In the course of the following year, the horrid transaction of putting out the eyes of the unfortunate Mogul, was perpetrated by the same Rohilla chief, Golam Cawdir (see Introd. p. cxi.), who took posseſſion of Delhi, and of the Mogul's treasures. Some have attributed this cruelty, to disappointed avarice: but it appears that Golam Cawdir took posseſſion of ALL the treasures; and that the sum of them was fully equal to his expectations. His brutal and insolent conduct towards his aged captive, was more probably in revenge of real, or supposed injuries. He very soon after, suffered an excruciating death from the hands of Madajee Sindia; who again pursued his schemes of conquest on the side of Rajpootana, with various success: although his arms were, on the whole, triumphant.

By the latest advices from India, matters appear to be far from settled, in the north-west of Hindoostan; where the growing

power of the SEIKS, threatens the peace, if not the security, of their southern and eastern neighbours. [See pages cxxi, and cxxii, of the Introduction.]

II. CORRECTION of the COAST of ORISSA, in the MAP of HINDOOSTAN.

[Refers to page 11.]

THE arrival of Capt. Ritchie in England, enabled me to correct that part of the coast, between the mouth of the Kannaka river (on the north of Point Palmiras), and the most southern branch of the Mahanuddy, or Cattack river ; from a tracing of that coast, made by Capt. Ritchie, by order of Mr. Hastings. From this chart it appears, that Point Palmiras is further to the eastward, in respect of Jagarnaut and Balasore, than is warranted by the materials, discussed in page 11 : for by the late observations, it ought to be placed (at least) in $87^{\circ} 5'$ longitude, instead of $87^{\circ} 1' 30''$. A reference to the map will best explain the respective positions of the principal mouths of the Mahanuddy, and other rivers, between the black pagoda and Kannaka. It is proper to observe, that the coast was not traced home to the black pagoda ; so that the *exact* position of Point Palmiras, is yet a *desideratum*. Capt. Ritchie was informed, when at the southmost opening of the Mahanuddy, that the black pagoda, was very near, on the south-west. It was, however, out of sight ; but this may be accounted for, by the form of the coast, which projects in a very large curve, and might intercept the view of the pagoda, from a person close under the shore, as Mr. Ritchie was ; although the pagoda might not be many miles off. The southmost mouth or opening of the Mahanuddy is in lat. $19^{\circ} 54'$: and is supposed to be about 19 miles to the eastward of Jagarnaut pagoda. The object of this examination, was, to enable the Government of Bengal, to fix on a

proper spot for a light-house, for the direction of ships round Point Palmiras, and into Balasore road. Capt. Ritchie gave the preference to the point itself (named Mayaparab by the natives), but no light-house is yet erected. I believe the matter rested with the merchants of Calcutta. The reef extends near 10 miles to the E N E of Point Palmiras, in the new chart. There was too much surf on the coast to allow his boat to land, so that he could not learn the names of the few villages that are dispersed along the coast. He is pretty certain that no large river falls in between Point Palmiras and the false point.

III. TRADITION concerning ALEXANDER'S crossing the INDUS, in the Country of SINDY.

[After page 181.]

THERE is, according to the report of the gentleman, mentioned in page 177, a tradition amongst the people of Sindy, concerning the place where Alexander crossed the Indus, on his return to Persia. They refer this crossing-place, to a point, considerably higher up than Tatta. It has been stated in the note, page 179, that TATTA stands in the inferior delta; but if the tradition may be depended on, as to particulars, it is probable that PATTALA stood in the superior delta.

It is worthy of remark, that in the map of Persia, mentioned in page 225, a town of the name of Eraba, stands on the eastern bank of the river that answers to the *Arabius* of Alexander and Nearchus.

IV. *Concerning the Position of SIRINAGUR, and the upper Part of the Course of the GANGES.*

[*Refers to page 227, et seq.*.]

I FIND that I was misled, by the map of the Ganges, made from the materials furnished by the late M. Tiefentaller; having, on the authority of that map, placed the town of Sirinagur (the capital of a district of the same name) on the *north* of Hurdwar: whereas, it appears by the observations of some English gentlemen, who visited Sirinagur in 1789, to lie nearly to the E N E of Hurdwar. It is a very extraordinary mistake; and ought to render us cautious in receiving other reports (of bearings, at least), from the same authority.

The position of Sirinagur is at present established, in the additional map (at page 65), on the authority of Capt. John Guthrie, who visited it in 1789: and who says, that "it is 85 miles from "Coadwar Gaut, through the hills: and 60 coses from Hurdwar, "up the Ganges, to the E N E: ascertained by a compass and "perambulator." (*Road* miles are no doubt intended.) I am indebted to Col. Mark Wood, chief engineer of Fort William, Bengal, for this obliging communication.

Mr. Daniel, with a party also visited Sirinagur, the same year: and he gives nearly the same idea of its geographical position. It is situated in an exceeding deep, and very narrow valley; formed by mount Sewalick,* the northern boundary of Hindoostan, on the one side; and the vast ridge of snowy mountains of HIMMALEH, or IMAUS, on the other: and from the report of the natives, it would appear, that the nearest part of the base of the latter (on which snow was actually falling, in the month of May), was not

* *Sewalick* is the term, according to the common acceptation; but Capt. Kirkpatrick proves, from the evident etymology of it, that it should be *Sewa-luck*.

more than 14 or 15 G. miles in direct distance, to the N, or N E of Sirinagur town.

In crossing the mountains of Sewalick, they met with vegetable productions, proper to the temperate climates; and the thermometer stood at $58\frac{1}{2}$: but in descending into the lower part of the valley of Sirinagur (although, as we have just said, the north side of it, is bordered by snowy mountains), the thermometer rose to 100° , in the shade: which was 2° higher than at the place where they first began to ascend, from the plains of Hindoostan.

Mr. Daniel was greatly struck with the magnificence of the scenery, during this short excursion; particularly in the valley of Sirinagur itself, on one side of which, the base of the snowy ridge may be said to commence: and the entire face of the mountain, from the base to the summit, meeting the eye at once, exhibits a boldness of front, and vastness of elevation, that is seldom equalled in one and the same point of view.

Some geographical information concerning the upper part of the course of the Ganges, and its principal branches, appears at the foot of a very characteristic, and beautiful sketch, of the two great chains of mountains; drawn by Mr. Daniel, and transmitted to this country; and communicated to me, by my friend Sir Joseph Banks. This information is contained in three geographical sketches, explained in some letters that accompany them. Two of these sketches are Mr. Daniel's original ones; and as far as they go, exhibit that firm attachment to truth, and *honesty* of discrimination, which I have observed in all the works of this ingenious artist: for he has made two distinct sketches, of what he *saw*, and of what he *only heard of*. The third sketch is called "Mr. Daniel's sketch "corrected:" and differs in one remarkable particular, from the original one; in that the Alucknundra river, which passes under Sirinagur, is made perfectly distinct from the Baghyretty: but Mr. Daniel's sketch describes the Alucknundra, as a branch of the Baghyretty, which separates from it, below the *cow's mouth*, and

rejoins it below Sirinagur. I know not to whom I am to attribute this "corrected sketch;" but some of the information written under it, differs from that contained in Mr. Daniel's letters.

Although the geographical information furnished by this tour, is not of a kind, perfect or circumstantial enough, to allow of its being inserted in the great map: yet, on the whole, assisted by our previous, though very limited, knowledge of the subject, we may draw from it, the following conclusions:

1st. That the Baghyretty (which I take to be the true head of the Ganges) and Alucknundra rivers, the former from the N, and the latter from the N E; join their streams at Deuprag, or the *middle* Gangoutra,* at a few miles distance below Sirinagur; and then form the *proper* Ganges of Hindoostan; which afterwards issues through mount Sewalick, at Hurdwar, the *lower* Gangoutra.

2d. That Sirinagur is situated on the Alucknundra, reckoned the largest of the two streams: and being there confined within a channel of 100 yards wide, runs with astonishing rapidity, and is crossed by means of rope bridges, of a peculiar construction.

3d. That the Alucknundra river (or at least the eastern branch of it) has its source in the snowy mountains of Thibet; and is traceable to Buddlenaut, or Badrenaut, nine journies above Sirinagur. The road being exceedingly difficult, great deductions must of course be made, in reducing the distance to a straight line. By the map, at page 200, it seems probable, that the Alucknundra is the same river that appears in Du Halde (Vol. IV.), under the name of *Manebou*; whose source is not far from that of the Ganges; and which it joins before that river issues from mount Sewalick.

4th. That the Baghyretty river, has a source far more remote than the Alucknundra: but through defect of information, the direction of its course above the *upper* Gangoutra, is unknown. The account in the corrected sketch, says, that one branch of it

* This is a compound term, signifying the *fall or cascade of the Ganga, or Ganges.*

comes from the lake *Dbul* above Cashmere : but this lake, as is well known, having no outlet *on the east*, from the valley of Cashmere ; any branch of the Ganges that comes from the north-west, must of course, spring from the mountains that lie on the east of Cashmere. As to the head of the Ganges itself, we cannot forget the particulars, communicated by the Lamas, sent by CAMHI ; whose report, although defective in geometrical exactness, has not fallen under any suspicions of error, or misrepresentation, in plain matters of fact : and their report was, that the Ganges issues from the lake Mapana, and runs westward ; afterwards turning to the south, and south-east. The messenger sent by Tiefentaller, appears to have corroborated this report ; though without intending it. [See pages 309 and 310 of the Memoir.]

The distance of the cavern, named the *cow's mouth*, is not written on Mr. Daniel's sketch ; but may be inferred by the proportional spaces, to be somewhat nearer to Sirinagur, than Badrenaut is. It is described to be above the *upper Gangoutra* (though I had supposed it to be one and the same place), and this last, is about 150 G. miles from Sirinagur, by Tiefentaller's account : and as this gentleman's report of the *distance* between Hurdwar and Sirinagur agrees with the late accounts ; that between Sirinagur and Gangoutra (as he also travelled it himself) may, I think, be admitted in the present case.

Upon the whole, we have made no advances, in the present instance, towards ascertaining the upper part of the course of the Ganges ; or that between its source and the cow's mouth ; which latter, we may conceive, from the accounts before us, to be situated in a north, or N by W, direction from Hurdwar. Between those points, the Ganges may be supposed to take a deep bend ; though perhaps not quite so deep as the Lamas' map describes it.

Mr. Daniel was informed (as we have before hinted), that the Baghyretty river, at a considerable distance below the cow's mouth, (that is, four journeys) separates into two branches ; the easternmost

of which is said to be the Alucknundra. It is however, so unusual a circumstance, in a rugged and mountainous country, for a river to separate into different branches; and these to unite again, at the distance of several days' journey, lower down; that it requires a more decisive kind of evidence, than the vague report of travellers; given perhaps, in a language not critically understood by the persons who received it. Concerning this, and other particulars, the very active and spirited inquiries, now pursued by our countrymen in India, may speedily furnish us with very satisfactory information.

My worthy friend, Col. Robert Kyd, of the Bengal establishment, whose active and philanthropic mind, directs every discovery, and every incident, towards the benefit of his fellow creatures; observes, on occasion of his communicating the narrative of Mr. Daniel's journey, to the Government of Bengal, "that the facility of communication with this Alpine region, enables those, whose ill health might otherwise compel them to revisit their native country, subject to the annoyance of breathing the unwholesome air of a ship, for several months; to effect a change of climate from that of the burning plains of Hindoostan, to the cold of Greenland (if required), in 48 hours; or to any of the intermediate temperatures, between those extremes: accompanied also with the no less desirable change of vegetable diet. To those European constitutions that have been relaxed, by long residence, in the lower regions of Bengal, the Rungpour frontier offers a similar resource; and is still nearer at hand."

INDEX

TO THE

M E M O I R.

* * The Names of Countries, or Nations, are in Roman Capitals; and the Names, or Titles of Princes, Rajahs, or Chiefs, in Italic ones. The Titles of Books, and the Names of Authors, as well as of other Persons whose Authorities are quoted, or whose Assistance has been acknowledged in the course of the Work, are in Italics: and the Names of Places belonging to Ancient Geography, have an * prefixed to them. The Roman Figures, refer to the Introduction; and the Arabic ones, to the Memoir, and Appendix.

†† Abbreviations.—Terr. Territories. I. Island. R. River. Pt. Point. Mt. or Mts. Mountain, or Mountains. Prov. Province.

A.

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<i>ABD ALLI</i> , meaning the subjects of the King of Candahar. See Candahar, and 167	
<i>Abdul Humeed Laberi</i> , 95, 99, 137, 139, 259	
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GENERAL MAP.

* The whole Map being divided into Squares, or Spaces, by the Intersections of the Parallels of Latitude with the Meridians, each particular Square is pointed out by Letters of Reference, alphabetically arranged along the Margins of the Map; the side Margins having capital Letters, and the top and bottom ones small Letters. For instance, the City of DELHI is given in the Index under the Letters E o : and if the eye be guided along horizontally in the Map, from E, until it comes under o, the Square which contains DELHI will be found.

* The Names of Countries, or Nations, are in Roman Capitals; and those of Princes, Rajahs, or Chiefs, in Italic Capitals: and such Places as have their Situations described in the Index only, and not in the Map (owing to want of room), are in Italics. Others have only a Part of their Names written in the Map: and the Part wanting, is also distinguished by Italics in this Index. The Places without Names, in the Map, are left, in expectation of being able to supply the Names, hereafter.

† Abbreviations.—Terr. Territories. I. Island. R. River. Pt. Point. Mt. or Mts. Mountain, or Mountains. F. Fort. G. Gaunt, or Pali. S. Serial.

A.					
AEDALLI	B d	Aczza	R. r	Admuscotia	X p.
Ahdongunge	H s	Adilangur	F p	Adoni	S o
Ahossangur	A n	Adam's bridge	Z q	Adriampatam	Y q.
Abugur	H l	Adareed	R i	AFGHANS.	The people
— hills	I b.	Adaumpour	S p	inhabiting part of Cabul	
Acbarpour	G r	Aderampar	L z	and Candahar.	
Acbarpour	G r	Aileypour	Z u	Afzalangur	D p.
Aesangry	S n	Adigunge	F n	Aganis	C r
Accoury	J t	Adiquar	G r	Agamo	X q.
Acheen	D b	Adj. R.	Q o	Agercite	A n.
Acory	H q	ADJIDSING, Terr. of I :	Ly	AGIMERE	G m
		Adjoutee	N n	Agimers	ib.
				Agges	Q m

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Agra	F p	Amanu	E s	Andra-Jerba	K x	
Aguada F.	S k	Amaroqui	I s	Aucour	Z o	
Aguava	F w	Amagur	M r	Angamally	Y n	
Ahar	H p	Ambugaum	N k	Angantole	C :	
Abgadeep	K s	Ambeer	F m	Angola	R o	
Ahrizrah	G z	Amiba	G p	Anguly-Bednore	U o	
Ajigur	H r	Ambo	O n	Angaram	X o	
Agimol	G q	Ambarry	K o	Angara	B s	
Ajatnagur	O o	Ambarpet	Q p	Angoutcha	B s	
Akoat	M o	Ambill	W m	Angla	L l	
Akowlah	N o	Amboor	W p	Augedive Is.	T k	
Alabert	E o	Ambla	Y u	Angriah's F.	See Gheriah.	
Alagore	W o	Amboosh	K s	Ancul	W o	
Alada I.	Z i	Ambiaser	K k	Anjanee	O k	
Alemhaddy	W o	Amedabad	K i	Angar	L f	
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Aliga R.	S l	Amedpour	O y	Anmaragoody	Z p	
Alinagore	X q	Amerpour	G y	Annanelli	Y o	
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Alik	R l	Amengong	P o	Anpour	M n	
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Alligunge	G u	Amoulee	G r	Arumroy	L e	
Allingherry	W p	Amood	L i	Atewill	M m	
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Almada	R n	Anantssagarm	P q	Ardingsy	Y q	
Almanchery	U q	Anasstoor	W p	Ardingsy	S q	
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Alpour	R o	Anamrugur	R n	Ansala	U p	
Aira	Y o	Anantasapilly	Q s	Aripo	A q	
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Alwara	G p	Ancola	O k	Ariflong	C w	
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Amarsutpour	F l	Amieah	K p	Arlier	W o	
Amadabaz	P l	Andicotta	Y n	Arnegeon	T r	
Amarchitta	R o	Andaman I. Great	W e	Arnes	W q	

Arnee	U r	Aurung	M t	Bah	G p
Arnaul I.	O i	Aurungabad (in the Deccan)	O m	BAHAR	H x
Aronee	H p			Bahar	ib.
AKOKHAGE	B d	Aurungpour	I d	Baigumunge	G s
Arpur	H x	Aurungalmnder river	K d	Bain river	O s
Arr	O k	Aurungabunder	I d	Bajapour	O m
Arrivacourchy	Y o	Armoor	P p	Bajepour	K z and F c
Arrah	H w	Aury	F z	Balepatnam	W m
Arrah	H z	Auspoor	K l	Balyogunge	L r
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Atcherawauk	W q	Badgnm	P o	Bamingola	L c
Archencoil	Z o	Badrachillum	Q s	Baminy	L l
Arcengal	B r	Baderally	R l	Bancaneer	P i
Athikeera	I p	Badamgur. See Bandemgur.		Bancout	S m
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Aifacoor	T q	Baldody	E o	Bandem	S k
Aiter	G p	Badergur	ib.	Bandemgur	M y
Attong	M b	Badshawpour	H s	Banderpol	K s
Attore	X p	Balerpour	G p	Bandoogur	U o
Attoor	Y o	Bagog	I x	Bangalore	A l
Attogode	B r	Bagoncotry	A n	Bangarin	I s
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— river	N i	BAGLANA	O k	and Bersilly	E q
— coast	Q z	Bogone	P o	Ban R.	F n
Avoro	S k	Bahbelgong	O J	Bandec	H q
Avelim	S k	Bahoot	X q	Bandersandry	G m
Avia	X o	Bahutracally	Z s	Bangermow	G r
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Baroach	M i	Bednore	U l	Beridge	L i
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Baroogong	N n	Beed	L f	Bermah	K b
Bari	R l	Beedagur	K r	Bernya	I c
Barrasur	K w	Beegygur	I u	Bernaba	D o
Barrapalong	M e	Beegygur	H p	Bernagur	I a
Barra	N x	Beejypour	H s	Berowly	H w
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Basbagee	G m	Belaspour	L u	Bherwa	I l
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Jyepour	G n	Kelli-nelli-cotta	Y q	Kistnaporum	R p
Jyepour	N y	Kellinore	W q	Kistnaveram	X p
Jyepour	H r	Kelnee	O i	KITCHWARA	I n
		Kelsey	P i	Kitora	I s
		Keltanpusmaclian	C e	Kitzhick R.	E x
		KEMAOOM	D r	Kivalore	Y q
		Kemnoon Mts.	E r	Koelcotty	A n
Kadraguta	L x	Kemgur	G y	Kokerwara	K i
Kaigum	O m	Kenamow	G s	Koketarra	L w
Kaijpet	T p	Kenawas	I n	Kokore	I o
Kainow	H q	Kendy	I x	Kokra	M t and K o
Kaitra	L i	Kenjar	H x	Kolaboora	M u
Kakna R.	Q n	Kontchian Mts.	A s	Komara	T n
Kalgaper	ib.	Koogong R.	Q b	Konapour	S i
Kalkally	O o	Kepeldee	X m	Kondur	P o
Kalkifree	C q	Kergong	L m	Kooch	G q
Kallodra	M i	Kesigar	E s	Koolbary	R r
Kumar Cataract	E s	Keleh	L p	Koond	H w
— Lake	D s	Kermana	F t	Koonda	I u
Kundabil	E d	Keronia	H p	Koonjoor	M x
Kandegherri	U q	Kerowly	G o	Koonka	K x
Kangani	T o	Kerrah	M h	Koorbah	L u
Kangoon	P d	Korroo	R m	Koorta	K y
Kanhar R.	M r	Kerye	N k	Koorumba	P l
Kanjee	N q	Kerton	A r	Kootakurwa	M n
Kinkersra	H m	Kesocotty	A n	Kooty	I u
Kannika	N y	Kevalcotry	B o	Koram	D m
Kanneah	D p	Kewan	I n	Korol	M k
Kannya	F r	Kheir	P k	Korma	E p
Kanoosara	L r	Khoud	M x	Ketchael	G m

K.

Kadraguta	L x	Kemgur	G y	Kokerwara	K i
Kaigum	O m	Kenamow	G s	Koketarra	L w
Kaijpet	T p	Kenawas	I n	Kokore	I o
Kainow	H q	Kendy	I x	Kokra	M t and K o
Kaitra	L i	Kenjar	H x	Kolaboora	M u
Kakna R.	Q n	Kontchian Mts.	A s	Komara	T n
Kalgaper	ib.	Koogong R.	Q b	Konapour	S i
Kalkally	O o	Kepeldee	X m	Kondur	P o
Kalkifree	C q	Kergong	L m	Kooch	G q
Kallodra	M i	Kesigar	E s	Koolbary	R r
Kumar Cataract	E s	Keleh	L p	Koond	H w
— Lake	D s	Kermana	F t	Koonda	I u
Kundabil	E d	Keronia	H p	Koonjoor	M x
Kandegherri	U q	Kerowly	G o	Koonka	K x
Kangani	T o	Kerrah	M h	Koorbah	L u
Kangoon	P d	Korroo	R m	Koorta	K y
Kanhar R.	M r	Kerye	N k	Koorumba	P l
Kanjee	N q	Kerton	A r	Kootakurwa	M n
Kinkersra	H m	Kesocotty	A n	Kooty	I u
Kannika	N y	Kevalcotry	B o	Koram	D m
Kanneah	D p	Kewan	I n	Korol	M k
Kannya	F r	Kheir	P k	Korma	E p
Kanoosara	L r	Khoud	M x	Ketchael	G m

Koterbugga	M u	Lackritapilia	T p	Long I.	W i
Kotinghy	M t	Lackwula	P w	Longee	O i
Kotona	F n	Ladoda	G n	Lomhanko	K i
Kotta	H n	Lahaar	G q	Loonpour	L g
Kotul	I r	Lahorey	O l	Lopary	H i
Kougy	I s	Lajapour	M i	Lorah	I s
Koudra	L w	Laidilla	P q	Louar	P o
Koukhoun	Q b	Lalada	Q q	Lawcooty	H y
Kouman	A r	Lalcotta	R p	Lowdehah	H z
Kounmeon	L k	Lali	B s	Lowrey	H r
Kouta	Q j	Lalpet	W q	Lowyah	G w
Kowra	N i	Laisoond	G n	Luchnow Pals	M s
Kowrah	M h	LAMA, country of	D z	——— Hills	ib.
Kouratty	P m	Lamcané	Q b	Luckeroot	L i
Kozdar	C d	Lamentung	C c	Luckia	F w
Kressabad	I r	Lampacan	B l	Lekiduar	G b
Krijinagur	E o	Lampichileen	S o	Luckinpour	K u
Krijinagur	G n	Langur Mts.	E a	Luzoinpour	P w
Keishnah R.	See Kistnash.	Lanke Lake	A r	Luckipour	L b
Kuhbooleah	D h	Lanur	H d	Luckipour	L c
Kudela	P k	Leraputten	R k	Luckipour	G b
Kudeel	K x	Laroh	M k	Lucknadang	L r
Kulla	M g	Lerry Bunder	I c	Lucknow	G s
Kullapollam	S r	Lufsa	C d	Luckour	K s
Kullierwa	L s	Lufsour	O m	Luckumry	I g
Kundalla	P n	Latour	ib.	Luniawara	K k
Kundawilsa	P u	Lsugeon	I g	Lundsey	P b
Kundal	K d	Laura	G l	Lungpour	I f
Kennipour	I t	Laurow	I p	Lungry	M z
Kupsinga	M a	Laurow	I x	Luseenuh	I u
Kurjaun	G p	Lochawar	I y	Luteefgur	H u
Kurkumba	L u	Leda	M w		
Kurkuna	K a	Lekinpour	N y		
Kurrah R.	P i	Lepcings	M u	M.	
Kutregur	M w	Lepra Lankeng	E d		
Kurrera	H p	Lethers	M o	Maa	Q p
Kurrigora	L w	Limbra	M h	Maattan	G y
Korsy	N m	Limbry	L h	Macherry	F o
Kosibah	H t	Linden	S p	Matheria	R q
Kutan	F s	Lingapour	O p	Machaia	H k
Kuti	D y	Lingumpilly	T o	Mackredypet	P p
Kutum	I u	Loardega	K w	Maconia	Q i
Kydrebud	G t	Logom	P k	Maculpa	F x
Kyra	F q	Logur	ib.	Madbah	F s
Kyradaw	I p	Lohari Napaul	F x	Maddiguer	S o
Kymgur	M s	Loharcana	ib.	Maddiguer	G y
Kyranty	G a	Loharoo	F q	Mades	Q p
		Lohorpour	F r	Madeian	G o
		Lohury	F g	Madenally	R o
L.		Lokohar	G y	Madore	W n
		Lolbazar	G b	Madoocarry	Y o
Lacaracoonda	K z	Loldong	D p	Madras	U r
Laccadive Is.	X i	Loigunge	H s	Madroo	W o
Lachmangur	F o	Loigunge	H t	Madugar	G a
Lackanwaidy	N o	Loigunge	H u	Madura	Z p
Lackergaut	C p	Loipour	G n	Magalawauk	U p
Lacki	I d	Loimby	X p	Magame	C t
Lackricotta	Y n	Lonee	P l	Maganore	X p
Lackritacotta	Q u	Louter	N l	Magaperam	S q

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Mago	C s	Maloncoona	Z p	Manoogur	O q
Magracotta	Y n	Malood	O x	Manorcotta	Z o
Maguz	Q p	Malour	X p	Manore	O i
Magullaonda	U o	Malory	W p	Manorpour	E s
Mahacondapali	W o	Malpaddy	ib.	Manot	O o
Mahamundela	U q	Malparty	A r	Maponur	I u
Mahanuddy R.	N w	Maltooy	M p	Maputtry	F q
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Maheira	P n	Mandabad	F q	Marattour	R r
Mahmoodabad	L i	Mamenda	R q	MARAWARS	Z p
Mahmudpour	K b	Manacoody	A o	Marella	S q
Mahoba	H r	Manally	R n	MARHAT. The country now called BAGLANA	
Mahomdy	F r	Mannacote	E r		N k
Mahomedabsid	G u	Manamangulum	Z o		
Mahony	K s	Manapar	Y p	Mariarchy	A o
Mahowiy	F r	Manapar	A p	Maricolum	Y n
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Mahudwah	N g	Manchul	H k	Martaban	R i
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Mahurry	K u	Mandeigur	M k		G k
Maimbaya	O b	Mandery	C t	Massibpet	Q p
Maisey	G x	Mandu	H l	Masan	F w
Makerdur	H o	Mandun	P o	Mascall I.	M d
Makeonda	I s	Mangalore	W n	Masorah	H x
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MALABAR COAST	Y m	Mangalore	W l	Mathepour	M f
Malspour	R o	Mangalore	W q	Matenbackrapetta	U q
Malivilly	W o	Mangalum	X q	Matramcoodo	T q
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Malleam	Y p	Manjha	K q	Mauliaveram, or 7 Pagodas	W z
Malletur	Y n	Masilla	T o	Maulsurga	L w
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Maundygant	E p	MEWAT	F n	Monegal	R r
Mauntry	M y	MEWAR, the same as OU-	O U	Mongalore	W q
Mauphaze Bunder	P w	DIPOUR	H I	Monghir	H y
Maupidadoo	ib.	Middatour	S p	Monglee	P o
Maw	B q	Midnapour	L z	Monglegarry	R r
Mayapour	K w	Midnyunge	H t	Mongletore	R o
Maydooh	L k	Milapour	U p	Mongopungol	H m
Mayem	O i	Milaveram	K x	Monguipata	O m
Meachegong	O b	Mill Gant	L o	Mongulcote	K z
Meaoom	L k	Minday	P b	Mongulhaunt	H b
Meahgurry	N m	Mindowly	I t	Mongumma	I z
Meaking	M i	Mindygaut	G r	Monicgur	P k
Meambolangam	O i	Minrow	F p	Monkeary	K w
Meanzoy	M k	Mirchour	S p	Montchu R.	E z
Meany-Choupa	M e	Mirgonda	Q o	Montour	H r
Meany	M f	Mirjanagore	L b	Montredy	O x
Mesudree	O b	Mirzagunge	L z	Monze Cape	I b
MECKLEY	I g	Mirzapour	F s	Moobad	G r
Medama	B r	Mirzapour	K a	<i>MOODATEE BOON-</i>	
Medampe	B q	Miserrepour	G q	<i>SLAH, Terr. of</i>	
Medipilly	S r	Mitgaing	K u	Moodupour	I c
Meendoor	R r	Mittampour	E p	Moodul	R m
Meerunge	H t	Mittampour	E q	Moogong	M r
Meerjaserra	H a	Moaganore	R o	Moogpour	K h
Meertah	G l	Mocaumpour	F x	Moogry	P k
Meerzaw, or Merjee	T l	Moddiguba	T o	Mooker	Z p
Megna R.	K c	Moddigong	M q	Moola	P l
Mehindry R.	K i	Moddel Bay	Z n	Moonagurra	R p
Mehuntpour	I p	Modenore	R s	Moonygurry	D p
Mel I.	X k	Mogulpour	D n	Moorbad	O x
Melcapour	M n	Mogulserai	G o	Noordampour	L o
Melconda	Q o	Mogulserai	H u	Mooreah	E r
Mellone, or Mettome	N i	Mogulserai	I p	Moorgong	N q
Melloor	Z p	Mohady	M r	Moorgul	Q t
Mellypour	I y	Mohanoo	I p	Moorkya	L w
Melpilly	T q	Mohaun	G r	Moorshedabad	I a
Memene	C t	Mohawry	J o	Moorsoon	N w
Menadow	N i	Moherry	O x	Moorude	P m
Mendow	K k	Mohgong	M s	Moot	H q
Mentha	N f	Mohun	G s	Mootachilly	X p
Mentole	Z r	Mohun	I o	Mootagara	R q
Meongow	N i	Mohungur	H p	Mootagonga	N r
Meraudahad	E q	<i>MOHURBUNGE</i>		Mootugood	Q q
Merawaw	M f	Moka	S o	Mootal	S p
Mereal	Q q	Mokamo	I y	Mootan	L o
Mergui	W l	Mokontpour	G r	Mootapaddy	Y p
Merjapour	I x	Mollilla	U i	Mootapilly	S r
Merjee, or Meerzaw	T l	Mollam	Q t	Mootingy	R r
Merindapally	W p	Mollidon	F q	Mopar	S q
Merritch	R i	Molnpatty	A s	Morabhad	G m
Merlom	Q o	Molodive	Z r	Moradgunge	G u
Merzapour	H t	Molrauzepollam	U r	Moraniker	O n
Mesanah	K i	Monaconda	Q q	Morbidery	U l
Mescinzungh	D z	Monssaha	F r	Mordyseer	T l
Metacoona	O x	Monasrai	M u	Moreadgong	N o
Methally	M h	Monattoo	I w	Morgurry	T o
Mettycunda	U o	Munchaboo	L z	Mori	F r
Mettone, or Mellone	N i	Moneah	H w	Morimal	S p
Metupetta	Y q	Moncer	H u	Moro R.	F m

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Moroucouma	X m	Multo	F k	NADERBAR.
MORUNG	G y	Mulyunge	H z	This circuit was formerly reckoned to
Messibai	G m	Mulyunge	G z	Malwah, but now to Can-
Mospony	B s	Mumbole	T q	deish.
Motselpatti	A r	Muncera	O l	Naderbar
Motecaze	L g	Mundapum	Z q	Nadgong
Moto	K i	Mundanagoody	R p	Nanout
Motoorah	L z	MUNDELLA. See Gurry	Nadum	L k
Motraspar	Z n	Mundella.	Nigacoil	Y n
Moush	M h	Mundella	L r	Nagalaveram
Moush	X p	Mundu	L m	Nagar
Moudyel	S p	Mungar	L o	Nagartz
Moulapudly	Y p	Munglapet	U q	Nagatch
Moular	X q	Munky	T l	Nagdam
Mouler, or Saler-Mouler	N l	Munnypour	I g	Nagemal
Mount Dilla	W l	Munsen	P k	Naggery
Mount St. Thomas	W r	Murcah	H s	Naggur
Mour	Q o	Murchapour	N o	Nagjurce R.
Mourteah	E s	Murdgur	O x	Nagone
Mousanagur	G r	Murfah	H i	Nagoordil
Mousfy R.	Q p	Murgah	L s	Nagorbafsy
Mow	F q	Murgaw	H r	Nagore
Mow	H q	Murgurry	U o	Nagore
Mow	H u	Murgioor	Q r	Nagowra
Mow	H x	Murjatta R.	M b	NAGPOUR. Understood to
Mow	I p	Mariavaddy	W o	be the same as BERAR
Mow	I t	Minor	O j	M q
Mowah	G t	Mureow	H t	Nagpour
Mowah	H x	Muscary	M f	Nagree
Mowee	L g	Musmurreah	G q	Naid Chokey
Mowgunge	I t	Mufsaon	O l	Naiserra
Mowamilladooru	T r	Mustan	I b	Nalididy
Mowil-Gonga	A s	Musmhabad	H z	Naldorouk
Mowley	O k	Mustara	S o	Nullacond
Muccapet	R r	Murbunny	G x	Nammoo
Muchandergur	Q l	Murchang	K b	Namacul
Muckyraiz	L o	Mutnaharrow	M f	Nanamow
Muckundunge	K x	Muttash	G w	Nancseram
Muddi	K e	Muttasy	G x	Nander
Muderar	K f	Mutty	L e	Nandenore
Mudgurry	K w	Mutnapollam	X q	Nandgeery
Mudnagur	F :	Muxoodpour	I x	Nandigaw
Mugainore	Y o	Myne R.	K k	Nangenore
Mugdoompour	H z	MYSORE	W n	Nandgon
Muggur	G u	Mysore	ib.	Nandouly
Muglatore	R s			Nandy-Allem
Mugice	U p			Nandyol
Mugroor	N p			Nangu
Mulangoor	Q p			Nanzoo
Mulgom	N l			Napacar
Mulhargunge	H q	Nabec	M k	NAPAUL
Mulkapour	Q q	Nabolunge	F s	Nappa
Mulky	U l	Nabolunge	G s	Naprum
Mullargur	I p	Nabolunge	G r	Nara
Mullawar	K o	Nabolunge	I z	Narucally
Mullaow	L k	Nabolunge	H z	Naruduconda
Mullickpour	L a	Nabusta	H s	Naraguntha
Mullincota	A o	Nadgong	N p	Naramgum
Mulnapour	G u	Nadanur	Y n	Narangabad
N.				

Narangur	L s	Negrals Cape	R g	Noel Is.	Y i
Naranpour	K e	Nehla	F n	Nogarcot	E y
Narpilly	Q q	Nehrwalch	K i	Nogong	I a
Narapilly	R q	Nemphy	K b	Nolotha R.	E y
Narcomiam I.	U g	Nelevangole	U o	Noka	H w
NARDECK	E m	Neilgoond	R m	Nokeda	I b
Nardole	R s	Nelisuram	W l	NOMURDIP	H d
Naredcott	A u	Nellambi	B r	Noncovery Harbour	A f
Narendra	G m	Nellipilly. It lies about a mile and half to the east of Yamam.	T q	Noongoala	H b
Nurhai	F n		T m	Noongotry	K t
Naripadurg	T p		Z p	Noony	I z
Narnalla	M o	Nellore	R q	Noopour	M k
Narnavaram	U q	Nelly	T m	Noornagur	K d
Narnol	F n	Nemally	Z p	Noorpour	K c
Narrickee	F p	Nemaram	R q	NORTHERN CIRCARS	P u
Narolly	M k	Nemeagee	M k		
Narsapour	R s	Nemen	A o	Noringah	I w
Narsapour	U o	Neminpilly	U p	Nosapour	L o
Narsapour	Q r	Nemli	R n	Noisari	N i
Narsapour	Q s	Neugengood	W s	Notchengong	N q
Narseray	F n	Ner	O n	Nothuwow	P b
Narsingapatnam	O y	Nerbuddah R. source	L t	Novanagur	N g r
Narsingur	L y	mouth	M i	Noudjer	R r
Narwah	H p	Nere	M p	Novigunge	F q
Narwur	N k	Nerelly	R n	Nou Kian R.	F k
Natsuck-Trimbuck	O k	Neriad	L i	Nou	F p
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Nattore	I b	Newtya	H b	Nowadah	I y
Nattrow	M k	Newrya	R k	Nowady	K w
Navara	Q m	NEYER	I h	Nowagur	I w
Navalpera	O k	Niague	K y	Nowagur	M t
Navapour	U l	Niagur	L t	Nowagunge	F t
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Naupent	S q	Niana	Q o	Nowhiyé	K m
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Nautan	G w	Nicanar	A c	Nuddeah	G r
Nautpour	G y	NICORAR ISLANDS			Nuddeah
Nawit	M n	Niddycorda	Z p	Nuddere	N o
Nayé	Q l	Nidjihabad	D p	Nugara	H w
Nayedapilly	T q	Ni ewudge R.	I n	Nuidingsah	K b
NAYRS	X m	Nimboo	I s	Nulhatta	I z
Neatimury	A n	Nimderra G.	O l	Nullaconda	R q
Neeligu	Q o	Nimilly	Q s	Nulla Sunca R.	I e
Neechinta	L x	Ningong	O m	Nullua	L a
Needumaran	V p	Ningam	Q p	Nulshi	I b
Neekalla	M l	Ningapour	R m	Nundeyerum	T q
Neelgur	M y	Nimrana	E n	Nunkar	O p
Neelgur	Q q	Ninghen	K a	Nunmore	H w
Neemear	F r	Nipatore	W p	Nunparah	F s
Neemdar	G o	Nishampour	H a	Nunsaru	N i
Neermul	O q	Nitchou R.	E c	Nurabad	G p
Neoval	W q	NIZAM AL/Y. , Terr. of,			I e
Neovalour	i b.		Q n	Nuraquinire	G w
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Nysarpet	U r	Ofsoorah	K z	Pallisapado	W q
Nychinta	H x	Osunpour	I c	Paliconda	S
		Otringbah	I f	Paliconda	W q
		Oudanulla	I z	Paliconda	Z n
		OUDE	F z	Palicudberry	Y n
		Oude	G t	Palighery	T p
Oclifscr	M i	OUDIPOUR	I I	Palindi	Z n
Odish	G o	Oudipour	ib.	PALL	K k
Odeypour	L u	Oudgah	L x	Palligoram	R q
Odrour	P p	Oudighir	P o	Palmitras Pt.	N z
Ogendow	M i	Ougein	K m	PALNAUD	R q
Ogidoo	K x	Ougly	S l	Paledygur	ib.
Oister rocks	T k	Oujoulinké	D r	Paité Lake	D c
— island	O e	Oulaguinagore	X q	Palvarya	F s
Oitong	C e	Oumary	N q	Palwall	E o
OKAMUNDEL	L e	Ouple	P n	Pamada	O i
Okerah	K z	Ourgoor	R o	Pamandoor	A p
Okilpour	I a	Ouringui	P o	Pambu	D z
Okrah	I r	Ouscotta	S m	Pamnagur	I o
Oliapour	H b	Ouscotta	U o	Pamodurte	T p
Oliapour	P n	Oufsoor	W o	Panagur	K r
Olli	S r	Outaspallam	X o	Pamangoody	A o
Oilya	L y	Outor	R l	Panangoody	Z p
Ombergzum	P k	Owahl, or Aonlah	E q	Panarcourchi	X q
Omelloor	Z o	Ouserah	I u	Panatallah	L s
Omerte	I s		P.	Pancawir	I m
Omeree	N o			Panchgong	O n
Omengong	N i			Panchpara	M u
Omengong	N n	Paalavanké	Q r	Panderla	Z p
Omerpour	N o	Pacherry	K b	Pandoly	O k
Omipallah	O o	Pachete	K y	Pandonser	P l
Omita	L i	Pachore	H p	Pandoo	P l
Ompuh	L a	Pada	M w	Panere	B q
Omraatty or Amraatty	N p	Paddar R. See Puddar.		Paneture	C q
Oncha	H q	Padepatnam	Y q	Paniamy	Y m
Onberga	P o	Padlee	N k	Pankira	N l
Ongergurry	O x	Padongmew	Q b	Panlang	Q i
Ongole	S q	Padrum	F x	Pannah, or Purnsh	I r
Onore	T l	Padraab	M i	Pannela (new)	R l
Onye	N k	Padshahpour	E o	— (old)	Q l
Ooda Ootaly R.	M o	Paily	Q l	Pannolah	N l
Oedapour	K d	Palman	C b	Pannunah	M q
Oolandour	X q	Pairumbaucum	U q	Panniyallum-crutch	A p
Olpar	M i	PAISHWAH of the MAH-		Pansar	K i
Oondipatty	O k	RATTAS, Terrs. of	Q l	Panchah	K b
Oongonda	R q	Palamcotra	A o	Panwell	O i
Oory	H q	Paluncotta	X q	Papanaud	Y q
Oorgaum	O m	Palmerdy	Z p	Papumow	H t
Ootamally	Y o	Palamow	K w	Paracho	H p
Ootampaliam	Z o	Palapetty	Y p	Paracoburecoil	Y p
Oootatore	X p	Paiatchy	Y o	Paradauga	H b
Ootcour	U o	Palavai	B q	Paragur Ruins	H p
Ooterwoody	Y o	Palavaseny	G l	Paramboor	Y p
Ootramalore	W q	Palcoor	A o	Paramonsera	S p
Orangabad	F p	Palcote	L w	Paramutty	X p

Parissoli	F n	Pawngaw	P n	Peploud	M n
Paratella	R r	Palarah	N q	Pera I.	D i
Parchoor	ib.	Paulum	K n	Peram I.	M i
Pargow	H q	Paunraw	K y	Periamood	Y o
Paridrong, or Paridsong	E a	Paunraw	L y	Perispatam	W n
Parkel	Q p	Pavoor	A o	Periapolian	U r
Parlagow	M n	Paupakelly	Q r	Periaculum	Y o
Parlie	N i	Paupanafsum	A o	Perinda	P m
Parmenalore	X o	Paupanafsy	Y q	Peringoody	Z p
Parnafta	H t	Pawah	I x	Perivale	ib.
Parnel	O l	Paytolee	E q	Permacoil	W q
Parone	Y m	Peacee	G w	Permers Rocks	U i
Paropal	X p	Peanjee	P b	Permelly	O o
Parpooty	S k	Pearl Fishery	A p	Parnally	N i
Parroah	A r	Pecharee	I p	Peroe	H w
Parshepatnam	Z q	Pechowly	H p	Perour	T o
Pastoi	M l	Pedapatam	R s	Perperengarde	X m
Particatty	A o	Pedda-Balapour	U o	Perrone	G t
Parur L.	Y n	Peddagudamy	R s	Persah	F x
Pasar	X p	Pedidupour	Q t	Persah	K u
Pafiswar	F o	Pediti-Balabaram	U o	Persaint	R g
Patada	O n	Pedenraig	W p	Persiah	'O i
Patchwarry	I z	Pedinaburam	A o	Pertabgur	H t
Patcoom	K x	Pedman	R r	Pertabpour	L z
Pategow	L o	Pedrapalore	W q	Perswar	I r
Pateagur	R n	Pt. Pedro	Z r	Petsapolly	Q t
Pateeta	H u	Pecndabatta	M t	Petelineig	Z p
Pateli, or Putala	C d	Pepurool	F q	Petrabar	K x
Patenode	B t	Perply	N y	Pettapolly	S t
Pargong	G b	Peergaww	P l	Pettapour	K i
Patmoor	Z p	Peernagur	F s	Pettapour	Q t
Parmour	R p	Peer Sheik's Tomb	K d	Peticotta	Y q
Patna	H x	Pegongmew	M i	Peyannay	F r
Patnours	L p	PEGU	Q i	Peyjuncie	I o
Patokah	O n	Pegu	P j	Pheeर Furrid	N q
Patou	ib.	Peint	K k	Phoory	N i
Patoual	O m	Peint	N k	Pialspour	K o
Patree	L b	Point Gaut	P k	Pinaly	Y o
Patris	O n	Pelicare	Y n	Pibigga	H x
Patrowra	I :	Pelang	M i	Pigeon I.	Q u
Patsah	K u	Pelow	O b	Pigeon I.	T l
PATTAN ROHILLAS	F q	Peliconda	P u	Pigeon I.	A s
Patran	E x	Penat	G p	Piliatla Pasi.	
Pattan	F n	Penamoushily	R s	It leads from	
Pattan	Q k	Peminoor	W q	the Carnatic, into Cudda-	
Pattancheru	Q p	Penawas	I n	pah, 17 miles south from	
Pattereah R.	C p	Pendarty	S r	Udegherri	T q
Pattergaur	F p	Pendown	N i	Pilleer	U p
Pattergotta	H e	Penna	Q m	Pilibheat	E r
Pattergotta	I c	Penmar R.	T r	PILNAUD. See Palnaud.	
Pattergur	D p	Pennigonda	R s	Pilwsara	H i
Patiad	L h	Penomozin	Y l	Pimpelgong	K n
Pattiary	F q	Penowal	H m	Pinagra	X p
Patticaut	Y n	Penticotta	Q t	Pindala	S q
Pattigam	P u	Penikonda	T o	Pinal	G i
Pattin	K i	Penutura	P w	Pipars	G n
Patungah	M u	Peny	I u	Pipeigong	N i
Pattyah	G q	Pcoory	O n	Pipelgong	O m
Pauganary	Z p	Peperah	K r	Pipcinair	N i

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Pipelpura	M. k	Poor-Bunder	M. e	Purbutty R.	I o
Pipercoote	G. y	Poorub	G. s	Purcewar	F. s
Piperry	N. m	Poorundar	P. i	Puresil	P. w
Pipley	N. n	Poeravah	G. s	Purgatty	P. u
Pipley	O. l	Pootgaut	E. p	Purgot	X. r
Pipley	M. z	Poothspafca	Q. q	Pugow	Q. k
PIPLIAH DAJAH	M. k	Pooya	I. a	Purki	I. t
Pippa	P. t	Poppergaut	G. t	Purnah	I. r
Piprah	P. i., F. q., and G. t	Porcah	Z. n	Purneah	H. z
Piprow	K. o	Porrogong	F. b	Pursangur	K. p
PIRATE COAST	Q. i	Portonovo	X. q	Purrownish	G. w
Pirote	H. p	Porur	L. p	Purush	H. a
Pitland (Guzerat)	L. i	Pofella	K. r	Purush	H. w
Pitlawad (Malwa)	K. l	Poudingory	X. m	Purtaumnah	H. y
Pitry R.	I. c	Porver	A. n	Pursoyah	I. w
Plafsey	K. a	Poulcotty	B. n	Pursur	E. r
Pocherry	Z. p	Poulmudy	S. p	Putala	C. d
Podia	S. q	Pourimitala	A. q	Putecabury	K. h
Podina	R. s	POURONKE	E. b	Putelam	B. q
Poila	X. m	Pourinbcoty	B. o	Putemahry	K. a
Pointy	H. z	Powangur	L. k	Puttan	O. q
Poka	G. w	Poway	G. t	Puttan Sunnaut	M. i
Poktoo	M. t	Powny	J. r	Puttresh	G. q
Polaram	Q. s	Prela	X. i	Puttyram	H. a
Policaud, or Palicaudcherry	Y. n	Preparis I.	T. f	Putyapury	I. d
Policole	R. s	Prone	O. b		
Pollay	H. x	Providien I.	A. s		
Pollay	L. t	Prygge	Q. h		
Poliput	U. q	Pulma	I. b	Quaga	P. b
Polore	W. q	Puccaseri	L. z	Quackmi Pagoda	S. k
Poly	Q. k	Puccaloe	I. c	Quilon	A. a
Ponada	G. l	Puckar R.	K. d	Quivisa	G. w
Ponakelly	Q. r	Puddambally	N. x	Quondanga	O. i
Ponaron	X. q	Puddampour	N. y		
Ponaveram	Y. o	Puddamiala	N. w		
Ponda	S. k	Puddangarde	Y. m		
Pondicherry	X. r	Puddar R.	H. k	Ran jegur (Malwa)	I. n
Pondimarka	Q. n	Pudgargong	M. q	Raat	H. q
Pongalish	R. q	Pudincotta (Tondeman's re-	Y. p	Rabnabad	L. c
Pongedamy R.	K. d	sidence	X. o	— L.	M. c
Ponlapilly	R. p	Pudicotta	Y. n	Racashbone	O. n
Ponmah	I. w	Puducund	F. k	Rachol	S. k
Ponziac	N. i	Puker	I. h	Rachour	L. r
Poodicorn	Y. p	Pulama	L. u	Rachour	R. p
Pookarya	I. a	Pulka	Y. q	Rachouric	T. p
Pock Padang	M. i	Pullecoil	G. z	Radanagur	K. y
Poolspark	W. r	Pullicate	U. r	Radawale	M. n
Poolbads	P. t	Lake	ib.	Radegurry	W. l
Poolgarry	Z. o	Pulmonare	U. p	Radimpour	I. h
Pooloo	R. b	Polyvelium	X. p	Raepour	G. q
Poolpour	H. t	Punchensee	G. z	Ragamine	C. r
Poolytopu	A. o	Pundipour	G. t	Ragogor	I. o
Poon-Gant	L. n	Pundua	H. d	Ragnapour	F. z
Poonacamada	Q. s	Punganore	U. p	Rahuy	H. a
Poomih	P. k	Pungnam	I. g	Rajecotti	B. a
Poommales	U. r	Punje	M. o	Rajecotti	B. p
Poonyd	P. w	Punjree	I. w	Rajagunge	I. e
Poonkur	H. b	Puraya	H. r	Rajgur	I. w and L. k
			B. r	Rajahum	P. u

GENERAL MAP.

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Rajakeera	G p	Ramisoram I.	Z q	Recumpada	Q s
RAJAMUNDRY	R s	Ramisundrum	U p	Red Crab I.	M e
Jamimdry	Q s	Ramusgur	G y	Redigooden	R r
Rajanagur	K z	Ramoo	M e	Redipatmar	Z p
Rajanagur	Q t	Ramoury	L o	Remal	G l
Kangjila	T o	Ramoutch R.	C s	Remporety	Z o
Lapour	H p	Rampah	Q t	Renapour	P o
Rajapour	R k	Rampara	Q i	Retringhery	T o
Rajaporum	X p	Rampicherla	R q	Rewah, or Roan	I s
Rajeece	H p	Rampour	E q	Rewari	E n
Rajaserai	D m	Rampour	F s	Reyoor	R r
Ribaug	R i	Rampour F w, G w, I m,	Ridolly		G p
Raidee	L w	I s, I u, T q	Rimbo		C b
Rайдургам	W q	Ramsel	N k	Rinaur	U p
Raje-Bchto	B i	Ramteak	M q	Ripera	N q
Rajbulhant	L a	RANA, Terr. of. See Ou-	Ritchel R.		I c
Rajecata	M g	dipour.		Rixi	K w
Rajegau	M e	Ranasagur	H w	Roanpear	I s
Rajegur	H o	Randeer	M i	Roaragur	P k
Rajegur	F o and I r	Rangalore	P u	ROCKAGE	B b
Rajegur	L z	Rangamatty	G c	Rosh, or Rewah	I s
Rajehant	K z	Ranganya	L z	Roodawn	F q
Rajemal	H x	Rangapilla	W r	Rogenzupour	K y
Rajematchy	P k	Rangasundrum	A o	Roheeta	G q
Rajemungatum	A o	Rangoon R.	R i	ROHILCUND	E q
Rajgiri	Q p	Ranjetpour	K y	Rohnd	K w
Rasigur	M u	Rankera	N u	Roleparu	N w
Rajode	K m	Rankporsh	I i	Romimesh	U r
Rajoornh	O o	Rammes	M y	Romkera	P l
Rajuapour	F w	Ranny Bednore	S m	Roonay	I y
Ramalipour	Q i	Ramygong	P l	Roopnagur	G m
Raimpour	F q	RANTAMPOUR	G n	Roopgur	N k
Rain	L c	Rantampour	I b.	Roscotry	B o
Raiseen	K o	Ranycotty	A n	ROSHAAN	L f
Raitapour	Q s	Rannypookra	K y	Rottas Gur	I o
Rikyporah	L u	Raoconda	R o	Rounreak	Q b
Ralicotte	R u	Rawutty	K l	Rousarali	H y
Ramagurry	Y p	Raperiah	S r	Rowlee	F s
Ramanadporum	Z p	Rapty R.	F t	Rowrah	H q
Ramas Cape	S k	Raree	S k	Rowtee	D p
Rumasoram	R t	Rasin	P m	Royniala R.	M a
Ramchundra	M z	Rafisoolpour	F m	Roymungul R.	M b
Raincity	C o	Rafisolphour	G q	Roypour	I s
Ramdilly	W l	Rate	T o	Roypour	L z
Ramedega	M w	RATHORE RAJPOOTS,	Ruanel		B r
Rameesapatam	S r	original country of	H k	Ruhabs	F o
Rameesapilly	Q t	Ratsur	O o	Ruguporam	Q p
Ramesoram	T p	Ratula	F t	Rajampet	F p
Rangury	Y n	Katoly	H z	Rundula	M l
Rangaut	E p and S l	Ratwah	G p	Runga	P u
Ramgonga R.	C q	Katwah	K o	Rungpour	H s
Rangur (Bahr)	K z	Raxflow	R q	Rumeah	M n
(Guzerat)	N k	Kawtry Dungaree	M e	Ronnode	H p
(Malwa)	I o	Rayhangong	N i	Rurow	G q
Rangur	P q	Raypour	M t	Ruthgur	M s
Rangur	F p	Ratula	M g	Rudam	K l
Rangur	N w	Rcang	I d	Ruttazurra	K p
Rangurra	I p	RECCAN. The same as		Ruttangur	O k
Ramingam	P o	ARACAN.	O g	Ruitungunge	K b

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Ruttunpour	L t	Sambarra	K p	Surney	P n
Ryacotta	W p	Samber	G m	Surrowly	O o
Ryalcherry	U q	Salt lake of	ib.	Sarser	O o
Rydraire	X p	Samiavaram	Y p	Sarurpour	D o
Rydroong	T n	Sami-Isuram	T q	Sarunna	I i
Rynahad	L b	Samulicotta	Q t	Sasanam	N w
Rypour	G p	Sanashygotta	G s	Sasaw	L l
S.					
Saspour	K c	Sandole	R r	Satashygur	H u
Sabermatty R.	L i	Sandy	F r	Sateram	W n
Sabuly	K k	Sandry	H m	Sattarah	Q i
Sackerigurry	Y o	* Sangada	H c	Satilpour	I h
Sackymunny	T p	Sangupilla	T p	Satinagram	R r
Sacrapatam	U m	Sangum	P p	Satipalum	Q q
Sacrapour	X q	Sangam	T q	Satisanegara	Y p
Sacrifice Rock	X m	Sangamundan	A n	Sattimungalum	X o
Sactagong	O m	Sanganeer	G n	Satrum	Y p
Sacuda	M m	SANGARIANS	L e	Savendroog	W o
Saddamol	H a	Sangool	K o	Saumspetta	U p
Saderbele	N k	Sangurry	U m	Sauksley	M m
Sadi R.	E o	San	H f	Saurungpour	K n
Sadras	W r	Sankaaty	H d	Saurzah	F r
Saghordy	I e	Sankeira	K m	Saurgud	W p
Sagral	R o	Sankerya	E p	Sawkul	O p
Sagrally	P p	Sankerydurgam	X o	Sawpour	K o
Sagor I.	M a	Sanko	I a	Sawree R.	M g
SAGUR	I q	Sanku	E x	Sayr	G w
Sagur	K p	SANORE	S m	Secundarah	E p
Sagwarah	K k	Sanore-Bancapour	ib.	Secundarah	G r
Sahar	F o	Sanowly	F u	Secunderpour	F o
Sahoor	P q	Sanparam	P w	Secunderpour	G w
Sahrah	G s	Sanpoo R.	C z	Secundra	F q
Saibgunge	G a	Sanquelim	S k	Sedashygur	T k
Saikote	L l	Samquem	ib.	Sedgwara	M k
Saipour	I t	Sanson	M o	Sedhout	T q
Sailgong	N m	Santa	I k	Seebgunge	H b
Sailoor	X o	Santa Bombally	P w	Seebgunge	H z
Sakkar	R o	Santupilly Rocks	Q u	Seodly	F y
Saladun	P b	Santashetla	L d	Seehurah	K r
Salapour	O o	Santerabury	G b	Seekpour	H t
Salawauk	W r	Santhul	M h	Seccor	K o
Salbarry	M p	Santipollam	Q u	Seerka	K w
Salbey	H p	Sanyangong	Q i	Seerpour	I a
Salem, or Selim	X p	Saouly	Q l	Seerpour	I b
Saler-Mouler	N l	Saoukera	B o	Seerpour	E p
Sali	O o	Saomit	K k	Seerpour	H w
Salimpour	G w	Ssourgam	O o	Seetacoon	L d
Sallom	X m	Sarmusga	K h	Seetrunghee R.	M h
Salli	P o	* Saranga	H c	Segurdac	Q p
Salloorgaut	P u	Sarungpour	A r	Segwah	N i
Sallumea	M i	Sarapilly	T q	Schalour	U n
Salon	X p	Sarapilly	Q q	Sehwan	G f
Salopar	A i	Sarhaut	I y	SEIKS, Terz. of	C i
Salpha	P l	Sazimpally	T p	Selim, or Salam	X p
Salisette I.	O i	Sarmee	I z	Selimabad	K a

Sellimpour	K z	Shahbunder	I d	Shukera	A n
Selka	K u	Shajehan	H x	Shurdhur	L z
Sellee	L k	Shajehampour	F n	Sialacoory	Y n
Sellempour	G w	Sharchampour	F r	SIAM, UPPR.	O i
Selingur	F q	Shaychanpour	G t	Siamodel	T q
Selooroorar	N q	Shaychanpour	K n	Siandapada	W o
Selon	X q	Shilaymalley	X o	Sianelly	# b
Seminagur	E s	Shambypatam	Y q	Siarichui	T q
Senapatam	W o	Shandamungalum	X p	Sibubas	K a
Senaura	F k	Shangrapoy	Z p	Sicanderab	F p
Sengans	F n	Shapary	M w	Siccacollum	R z
Senke	E d	Shapora	G n	Siccapilly	U o
Sepantmagur	L o	Shasava	G p	Sickhery	G q
Sipoory	H p	Shark	O l	Sickhery	H q
Sepou	F p	Shatour	Z o	Siclygally	H z
Sepra R.	I n	Siatore	ib.	Sidgur	O k
Septong	C b	Shatore	Z p	Sidoney	F r
Sequeang	Q i	Shawabad	H o	Sidra	I w
SERA	U n	Shawgunge	G r	Sleugur	L l
Sera	ib.	Shawpour	K u	Sigaram	R p
Sera	K k	Shawpour	L p	Sihor	M h
Serai	M l	Shawroah	I o	Silah	I z
Serampour	I y	Shaye	L g	Silcoju	W n
Serampour	L z	Shazalbary	E p	Silser	I d
Serapungne	H z	Shazadpour	I b	Sillee	K z
Seray	I s	Sheally	X q	Simor	G q
Seraya	G q	Shearpour	H c	Sinlee	L k
Sergode	U m	Sheergotty	I w	Simlya	N w
Sergom	O i	Sheergur	F p	Sitmoosah	I t
Sergour	U m	Sheergur	H p and I o	Sinmoga	U m
Serinagur	H q	Sheer Mohamed Pett	R r	Simulcandy	I c
Serineash	H z	Sheerpour	E p	Sinda	N k
Seringham	Y p	Sheerpour	F p	Sindejuz	F w
Seringapatam	W n	Sberoya Mally	Y p	Sindekeerah	M l
Semattro	G o	Siclopur	W q	Sinde R. on Indus	G f
Seronge, or Sirong	I p	Shekoabad	F q	— (or Cally Sindy) I o	
Seroor	P l	Shencotry	Z o	Sinder	O k
Serris	I w	Shengina	ib.	SINDIA MADAJEE,	
Serrymautju	I l	Shetabava	Y q	Terr. of	H o
Serwar	H o	Sheteru	X o	Sindole	N u
Serwill	M n	Shevagunga	U o	Sindourcotty	A n
Setapour	R o	Shevgunga	Z p	SINDY	I d
Setiana	H k	Shevagurry	Z o	Sineer	O k
Settisveram	Q t	Shevaloor	Y p	Singapetty	A o
Setticulang	Z r	Shevalpettore	Z o	Singapetty	W p
Seven Pagodas	W r	Shevalpettore	Z p	SINGBOOM	L x
Severndroog	Q i	Shevaporum	X m	Singcollam	A o
Seurah	H r	Shemdamangaly	A p	Singeconda	S q
Sewalick Mrs.	C o	Shingricunda	S q	Singerbill	K d
Sewan	G w	Shionkan	Q i	Singeram	Q p
Sewary	K u	Shionkan	R i	Singhore	H s
SEWEE	E e	Shiroa	C x	Singhole	K q
SEWEESTAN	G f	Shival	R n	Singnya	H x
Sewnaddy	M t	Shiverapilly	P u	Singoomuw	M i
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Seyer Is.	A z	Sholingur	U q	Singrepatta	Y p
Scylone	G z	Sliolarunboo	Y o	Singrecom	P o
Sigatche	C z	Shoray	I p	SINGROWLAH	K u

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Singur	I x and P k	SOONDA	S k	Sundeep L.	L. d
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Siocottel	A s	Soonygong	L r	Sunderjulus	M d
Sionmaly	Z r	Sooawalla	M o	Sunderdeo	R k
Siondelur	S q	Soopour	H u	Suncampour	L d
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Siticote	Q n	Sovree	L z	Surat	M i
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Soneer	G q	Suker	P f	Satrapur	M f
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Talegong	P o	Tauli	W o	Tiloutta	J w
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Tambou	Z o	— in Bagiana	O i	Tinevelly	ib.
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Tamlook	L z	Teestah R.	F z	Tingoreally	L z
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Tankunny	N o	Tepten	C d	Toagamally	V p
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Tamore	Y m	Tegarry	U m	Toddipoondy	R t
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Tarselly	X o	Terriore	X p	Tomlay	Q u
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Toodawah	Q b	Trivadi	X q	Unjara	G o
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Tourchengada	X o	Turancourchy	Y p	Valegar	X n
Tourvacora	U n	Turee	F w	Valiodu	A o
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Towpaal	I b	Turki	G x	Vanancoupan	X q
Trangarde	Y m	Turlah	P w	Vangole	X p
Tranquebar	X q	Turorah	M r	Vaniamhaddy	W p
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Trinkamaly	A s	Udebode	C r	Vellepekonda	Q q
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Tripperty	U q	Unchassae	E p	Veracundalore	U q
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GENERAL MAP.

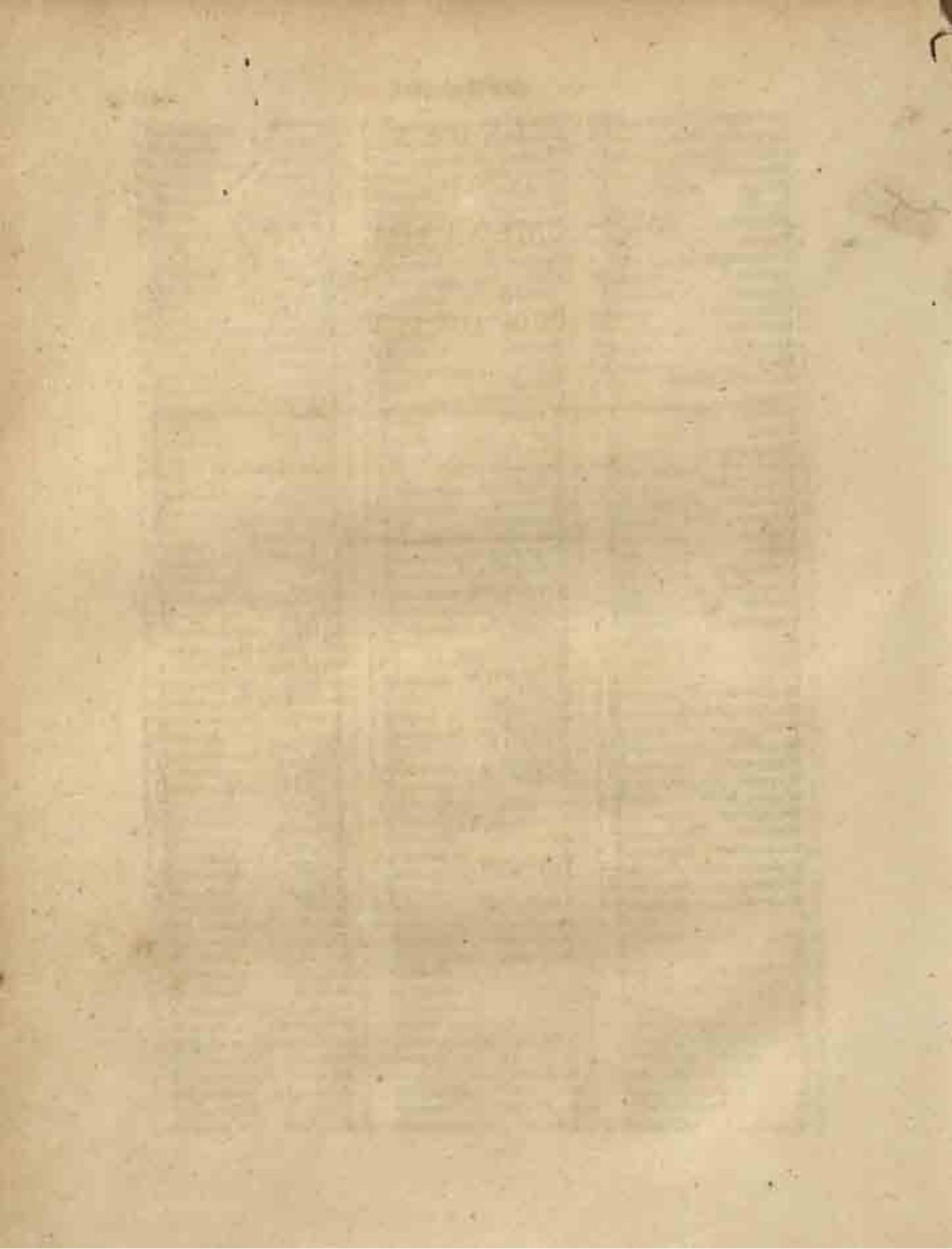
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Versara	L i	Waradura	T p	Yarepul	C s
Versaul	N i	Warangole	Q q	Yares	M k
Versveluna	W q	Wandwan	L h	Yatcheveram	T q
Viatorc	W m	Waree	K g	Yatong	M k
Vickryvandy	W q	Wargam	L i	Yattoonur	B r
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Vinja	K i	Watara	Q u	Yelchore	i b.
Vinkatty Chillum	T q	Watrap	Z o	Yelcoor	U q
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Virungan	L h	Wattinad	V q	Yellang	O i
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Visnapoor	Q m	Weylanoo	N f	Yerupatra	U q
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Vizapour	O l	Wocanally	S n	Yetcheradaw	T n
Vizeroy	R s	Woglydurgam	W o	Yetcopauk	Q t
Viziamgram	P u	Wollapetlam	X o	Yeula	O l
Vizianagur	O w	Wombinellore	X p	Yocotte	O p
Vizrabby	O i	Wontamitta	U p	Yo-Sinpo R.	F z
Volconda	X q	Woodgurry	U m	YUNAN	H m
		Woodiour	Y o	Yuntchian	i b.
		Woodsamadrum	Q s		
		Woodycutty G.	T l		

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Wackmoyust	N i	Wootamally	Z o	Z. Cape	Q s
Wair	F o	Worganum	P k	Zamrkote	F b
Wageerah	O k	Wur.uree R.	M g	Zangesair	Q i
Wagnagur	M h	Wurwama	L g	Zaungong	N i
Wagoly	P l	Wuttoor	O l	Zem	G r
Wagur, Little	K g			Zelon	C d
Waigunge	H t			Zemowah	P b
Walgom	B r			Zinnore	M k
Walipatam	V a			Zivagee	Q i
Walloor	S r	Yasgongmew	P b	Zogor	D a
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Y.



INDEX
TO THE
SUPPLEMENTARY MAP,
OF THE
HEADS OF THE INDUS, &c.
AT PAGE 65.

* * The Names in Italics are omitted in the Map; either for want of room, or through defect of authority.

A.				
<i>ABDALLI,</i>	d 1	Anbert-Sir, or Chuck-Gou-	Bajaruck, or Bazaruck	d 4
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Abdurra	ib.	Anopshier	-	a 1;
* Acesines R.	d 9	Aory	and Map, page 200.	c 3
Aeneur	d 9	AROKHAGE. See the Map	BALLOGES	e 9
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Aliunguran	c 2	Asnida	Banou, or Bumao	d 6
Akora	c 7	Absoum	Banour	f 12
* <i>Alexandria</i> (Peropamissum).		Attock	Barai	e 8
Supposed to have stood at		— River, or Indus.	Buran R.	b 4
the southern foot of the		— River, by Sealkote	Breckidewar	c 3
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quarter towards Bamian		Aurungabad	Barchmoolch	b 9
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Ali Musjid	c 6		Batala. See Betala.	
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<i>Allumban</i> , the name of the			Baun Gaut	g 14
Indus river, opposite to			Bazaar	c 7
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ALIUNKAR	a 5	BADAKSHAN	Beheduran	b 11
River	ib.	and Map, page 200.	BEHDUROO, or <i>Raj Beh-</i>	
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		Bahadermagur	BEKRAD	c 11
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Kheep	^d 7	Lackergaut	MOULTAN	^f 6
Kekkur	^d 9	Lucky Jungul	Moultan	^f 7
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Keynsapour	^f 14	Lar	Mucund	^e 9
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Kherpab. See Gherpan.		Losgur, or Daber	Muker	^b 8
Khinjan, or Kanjan	^a 3	Loldong	Mulna Shaddy	^c 2
Khyber Heights	^c 6	Lony	Muncher	^d 9
Seras	^{ib.}	Lucca R.	MUNDERAR	^b 5
Khyzerabad, on the Jum- nah River, near the foot of the Hills of Surmour.		Ludhana Gaut	Mundul-muder	^e 10
Kishen-Gonga	^b 8	Luket	Munglore	^c 7
KISHTEWAR	^e 10	LUMGHANAT	Muroo R.	^c 10
Kohaut	^c 6	Lumghan	Mushiedaw	^c 3
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Kooshauab	^e 7		Muzifferabad	^b 8
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Koram	^f 12		Mydan	^b 4
KOTEN. See the Map at page 200.		M.		
Kowkoob R.	^c 7	Machiawari	N.	
Kubbooleah	^f 8	Mackhowal	Nackergaut, or Lackergaut	^f 14
Kuchee S.	^d 9		Nabeh	^f 11
Kujaxole, about 12 miles S E of Nilab	^d 7		Nadone	^c 3
Kukri, or Gukri R.	^d 9		Nuggur F.	^c 3
Kullanore, or Callanore	^d 10		Nagorkote	^d 11
Kullaut, Jeillaut, or Zellaut	^c 2		Nagorpal. On the Beyah River, between Ray-Gaut and Seba.	
Kun, or Ken	^b 6		Nan, or Naham	^f 13
Kungipara	^g 13		Nahoun	^f 15
Kupchatk	^a 3		Nainsook R.	^b 8
Kupporeah	^f 10		Nakoordar	^e 11
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Kurakeer	^b 5		Nangul	^g 11
Kuratoo. It lies between Cabul and Lunghan.			Nani	^c 4
Kurboozeh	^d 7		Nanyleh	^f 12
Kurk, or Ghurg	^b 5		Narsilah	^b 13
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Kufsoor	^c 9		Nidjibgur	^g 14
Kutteur	^c 9		Nilab R. or Sinde	^b 7
KUTTORE	^b 6		Nilab	^c 7
Kattore Fort.	^a 5		Nisang	^g 12
Kyrupour. It lies a few miles to the N E of Mack- howal	^e 12		Noopour	^d 11
			Noor-al-deen Serai	^e 10
			Noormatal	^c 11
			Nohshehra (Palshawur)	^c 7
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Nughz	c 5	Ramdaspour, or Anbert-Sir	c 10	Seigab. A pass on the Indus, 3 miles above Attock	c 7
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Ouhind	c 7	Rauree	c 8	Setlige R.	c 10 and g 6
Ouller Lake	b 9	Rawlpundy	d 8	SEWAD	b 6
Ouri	b 9	Ray Gant	c 11	— River	b 7
Ourmul	c 11	Reishi Gaur	d 7	Sevalick, or Sewa-luck Mts.	
Outch, or Utch	f 6	Rejsbah	c 8	This appears to be a general term for the ridge of mountains that bounds Hindooostan, on the north.	
P.		RETCHNA DOABAH	c 8	SEWEE	f 4
Pael	f 11	Rohruk	b 12	Shahabad (Sirhind)	f 12
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Ajodin	f 9	Rurtun Punchal Mts.	c 9	Shahpour, or Rajepour	d 11
Patiala	f 12	Rypour. A pass on the Chunaub, between Scl-kote and Rotas	d 9	Shahpour	c 11
Peer Punchal Mts.	c 9			Shanawaz	f 8
Pekker Serai	d 8			Sheabudeenpour	b 9
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Penjeshchr, or Rukka	ib.	Sadreesbad	d 9	Shemiran	c 5
Pessing. See Pusheng.		Sahetty	d 8	Shibr Heights	b 5
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Pilotou	c 6	Saifabad	f 12	Shaker. See the Map at p. 200.	
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Sultanpour (Lahore)	c 7	Toglocpour, or Tuglickpour	b 13	Wulli Mts.
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FINIS.

MEMOIR
OF A
MAP OF THE PENINSULA OF INDIA;

FROM THE LATEST AUTHORITIES.

EXHIBITING

ITS NATURAL, AND POLITICAL DIVISIONS:

THE LATTER, CONFORMABLE TO THE
TREATY OF SERINGAPATAM, IN MARCH, 1792.

WITH OBSERVATIONS
ON THE POLITICAL AND MILITARY ADVANTAGES THAT
MAY BE DERIVED FROM THE NEW CESSIONS :

AND

AN ACCOUNT OF THE SITE AND REMAINS OF THE ANCIENT CITY OF
BEEJANUGGUR.

By Major RENNELL.

How to ensure peace for any term of years, is difficult enough to apprehend. Will human nature ever cease to have the same passions, Princes to entertain designs of interest or ambition, and occasions of quarrel, to arise? May not we ourselves, by the variety of events and incidents which happen in the world, be under a necessity of recovering towns out of the very hands of those, for whom we have taken them?

SWIFT'S CONDUCT OF THE ALLIES.

LONDON:

PRINTED BY W. SULMER AND CO.

FOR THE AUTHOR: AND SOLD BY C. NICOL, BOOKSELLER TO HIS MAJESTY, FALMOUTH.

1793.

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THE chief object of this publication, is to explain the present state of the political Geography of the Peninsula of India; together with the advantages that may be derived from our territorial acquisitions, made under the late Treaty of Seringapatam. The requisite information has been drawn from materials produced by the late war: and which enable us to describe the true figure of the Table Land (or BALAGAUT-CARNATIC); and the boundaries of the territories ceded to the Allied Powers, as well as of those remaining to Tippoo Sultan. The quantity of new materials already brought to Europe, is so great, as alone to warrant an entire new construction of the geography of the Peninsula: but it also became *necessary*; in order to describe with effect, the cessions made by Tippoo, to the Mahrattas and Nizam: for these occur in that part of the geography which has hitherto been very imperfect. A new construction has therefore taken place; and the form and dimensions of the Peninsula, have undergone some alteration, in consequence.

The scale of the present Map, which is only two thirds of the former one, is supposed to be fully adequate to the purposes of expressing the several particulars, required for the illustration of the general politics of the country; the scope of the operations of the late war; and the new boundaries, as settled by the treaty of Seringapatam, in March 1792. Had the scale of the former map been adopted, which could no otherwise be necessary, than for the purpose of introducing the detail of it, into the present one; a very considerable interval must have elapsed before it could have been

presented to the public: whose curiosity being at this time awake to the subject, may perhaps, be more usefully gratified by receiving *correct general ideas* at the present moment, than by a more detailed account at a future period. Besides, those who may be already in possession of the former map, will find it retain its former use, in the south Carnatic, and in the southern part of the Peninsula, in general; for the trifling error in the difference of longitude, between Madras and Cape Comorin, does not render that part of the map less useful for ordinary references. And the same may be said of both the sea coasts.

Some of my readers may, perhaps, think that I have entered too much into detail, concerning the ancient division of the Peninsula: however, it appeared to me, to be more convenient to describe it in the Memoir, than in the Map: for had it been expressed on the Map, it would have been to the disadvantage of the matter, that ought to press more immediately on the reader's notice; by rendering it less clear and intelligible. And the notices concerning the conquests, partitions, and transfers of territory, could not well be omitted; because they lead the reader more immediately, to the knowledge of the relative connexions and dependencies, of the several provinces of the Peninsula; previous to the Mysore conquest.

As the late visit of Lieut. Emmit, to the ruins of the ancient city of Beejanuggur, the capital of the last Hindoo empire in the Peninsula, appears to furnish some curious particulars respecting a place that was little more than known to us by name, during the time of its existence; and has since been consigned to oblivion; I thought those particulars might be acceptable to the public; and not out of place, either, considering the subject matter of the Memoir. I have also added some historical facts, in explanation; one of which will explain the apparent reason of Tippoo's reserving to his sovereignty, the district of Annagoondy; situated within the tract ceded to the Nizam.

I shall now proceed to describe the manner in which I have endeavoured to illustrate, by the use of colours, the particular objects of this publication ; which are :

First, a clear discrimination of the present boundaries of Tippoo's territories ; and those of the cessions made by him, to the British, and to their allies in the late war, the Mahrattas and Nizam ; and

Secondly, an exposition of the advantages resulting from the arrangement and combination of the several posts on our new frontier towards Tippoo ; considering that frontier as made up of the territories of three powers ; namely, the British, the Nabob of Arcot, and the Rajah of Travancore . since the state of mutual protection and dependency subsisting between them, blend their respective territories into one mass, in the view of foreign politics. This being the case, the common frontier of these confederated powers, should be considered as belonging to one and the same state ; and, of course, be distinguished by one common colour ; in order to ascertain its general bearings, on that of Tippoo. Without this associate idea, no adequate judgment can be formed, of the value or use of our new acquisitions : for taken independent of any connexion with the Carnatic and Travancore, the new acquisitions appear to be insulated and surrounded by other states : but if properly considered, they are a part of the great mass of territory, united under the description of THE BRITISH POSSESSIONS AND ALLIANCES. Therefore, this mass of territory has its *exterior* frontier, or that opposed to Tippoo and the Nizam, marked by a continuous red line ; which is also bordered on the side of Tippoo by purple, and on that of the Nizam, by orange. By this method the whole frontier appears in a geographical view, like that of a single state ; which, as we have said before, is virtually the case.

The subdivision of this mass, is as follows :

The British acquisitions from Tippoo, are marked on the interior boundaries, by DOTTED RED LINES : but their former pos-

essions in the Guntur Circar, and in the Jaghire, are left *un-coloured*; to prevent their being confounded with the new ones.

The territories of the Nabob of Arcot, and of the Rajah of Travancore, are marked with **YELLOW**, within the red line of the exterior boundary: which yellow line also denotes, of course, the ancient frontier of our possessions and dependencies in the Carnatic and Travancore.

The acquisitions of the Mahrattas, and the Nizam, are severally distinguished by **GREEN**, and by **ORANGE**: of which the *dotted** part marks the former boundary of Tippoo: and, of course, the former boundaries of the Mahrattas and Nizam towards Tippoo, may, from circumstances, be deduced from it. And the *continuous* lines, shew the present boundaries of these powers, towards Tippoo.

The new boundary of Tippoo Sultan, is marked by a **PURPLE** line: and it is obvious, that if we add to the territories included within it, the tracts, whose extremities are marked by dotted lines of red, green, and orange, we gain a complete idea of his original territory.

The above colours are those which have been severally appropriated to the same states, in my Maps of Hindoostan, and the Peninsula: but with the addition of the red line, *here*, to mark the collective frontier of the British possessions and dependencies.

* The dotted purple line near the Kismah river, is explained in the course of the Memoir, page 10; and has no immediate reference to the present subject.

December 7th, 1792.

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SECTION I.

CONSTRUCTION of the MAP of the PENINSULA of INDIA.

IT is foreign to my intention to enter into a minute discussion of the whole geographical construction of the map, or of a particular description of the several materials employed in it; contenting myself with stating, as briefly as possible, the manner in which the principal outlines and dimensions were determined.

As it is not known whether the distance between Seringapatam and Cannanore, (on the Malabar coast) in the sketch drawn by Capt. Reynolds, and sent home by the Marquis Cornwallis, in the last dispatch, was actually measured; we are still left in a state of suspense concerning the true breadth of the Peninsula, in that important parallel. I am however, strongly inclined to believe that it was measured; because it seems likely that Captain Reynolds (whose zeal for improvements of every kind is known) had an opportunity of doing it: and because his representation of the distance, differs, in some degree, from all the former accounts of it: to which may be added, that his result agrees nearly with the computation of the land marches; and with Capt. Huddart's longitude. For the distance arising on a computation of the mean length of General Abercromby's marches, differs from Captain Reynolds's sketch, $3^{\circ} 45''$ of longitude only: the computation being so much less, than the sketch gives: the one giving $1^{\circ} 18' 30''$, the other $1^{\circ} 22' 15''$, difference of longitude, between Seringapatam and Cannanore.

Seringapatam is placed by Capt. Beatson's measurement from Madras, at $3^{\circ} 34' 30''$ west of that place: and reckoning Madras, at $80^{\circ} 25'$, as in my former map,* Seringapatam should be in longitude $76^{\circ} 50' 30''$. Its latitude is $12^{\circ} 26'$. If then we subtract from the longitude of Seringapatam, the difference of longitude above expressed, we shall have for the longitude of Cannanore, $75^{\circ} 28' 15''$, according to Capt. Reynolds's sketch; $75^{\circ} 32'$, according to the computation on the marches; or for the mean of the two (as we are not certain that the distance was measured), $75^{\circ} 30'$.

Capt. Huddart, makes the longitude of Cannanore by chronometer, deduced from Bombay (and the account closed to Bombay again) $75^{\circ} 27'$; taking Bombay at $72^{\circ} 54'$: or $75^{\circ} 29'$, taking it at $72^{\circ} 56'$, as some later accounts make it. † So that the accounts of the longitude agree very well, in a general view, with the lines drawn across the Peninsula from Madras. In my former maps, I adhered to Capt. Howe's report of the longitude of Bombay: but the accordance of the present materials, ought, I think, to decide the matter in favour of Capt. Huddart's observations and deductions.

The present construction is also very materially improved in its outline, by Capt. M'Cluer's tracing of a great part of the Malabar coast: and by Mr. Topping's actual measurement of the Coromandel coast, between Madras and Point Calymere. Capt. M'Cluer's observations extend from Zyghur (or Jyeghur) to Carwar, in a continued line. Also from Mount Dilla to Mahé; and from Cochin to Anjenga: the remaining parts were left unexamined, because of the then state of hostility with Tippoo. Part, however, of this defect, is supplied, between Merjee and Cundapoor, by Capt. Reynolds's survey, in 1781:‡ so that an extent of about 360 miles, out of 570, between Zyghur and Anjenga, has been explored.

* See Memoir of Map of Hindoostan, 2d edition, page 9.

† Here it is necessary to remark that Capt. Huddart's observations go to Mount Dilla only, which he places in $75^{\circ} 16'$, and Cannanore is $\frac{1}{11}$ to the eastward of it, by Captain M'Cluer's chart.

‡ See the same Memoir, page 28.

Mr. Topping's survey of the coast of Coromandel extends about 3 degrees of latitude between Madras and Point Calymere. The result shews that the latter lies about 4 minutes farther to the west than the former map, allowed. This, however, occasions so little difference, in the detail of the geography of the Carnatic, that for ordinary occasions, the old map retains its former use, in that part.

The remainder of the Coromandel coast, northward, was traced cursorily by Capt. Ritchie ; and its general position was determined by Col. Pearce's line. (See Memoir of Map Hindoostan, pages 10 and 12.)

Between point Calymere and Anjenga, we remain in our former state of uncertainty ; that part being copied from the last map ; save in the short interval between Anjenga and Cape Comorin, which difference of longitude, I have lessened by 8 minutes.

The present map has in its interior part, a sufficient quantity of new matter to adjust the positions in general, through a principal part of the tract, between Chittore and Cannanore, on the east and west ; and between Chinna Balabaram and Dindigul, on the north and south. Most of this has been obtained by actual survey and measurement ; executed by Capt. Beatson, and Capt. Allan ; and is the immediate offspring of the late war in the Peninsula. Much other matter, though not so correct in its nature, has been obtained by cursory observation and enquiry : such is the course of the south branch of the Cavery river ; which is ascertained to spring from the Coorg or Coorga country, and to pass by Siddapour.* The extent and form of the Coorga and Nayre districts, are collected from documents transmitted by the Marquis Cornwallis.

The junction of the Toom and Buddra rivers, which form the greater river Toom-buddra, is ascertained by reference to the me-

* For this particular as well as some others, I am indebted to the obliging communications of Major Dirom, of his Majesty's 52d regiment. His History of the Marquis Cornwallis's last campaign, now in the press, will probably render the geography of the tract now before us more interesting than any endeavours of mine can render it.

morandums of Major Dirom, to take place at Hooly-Onore, about 20 miles to the northward of Bankipour; and the particular course of this river, between Hurryhur, and Seergoompty, in the neighbourhood of Adoni; is from a survey taken during the war, by Lieut. Emmit of the Bombay Establishment. The remainder of its course, and place of junction with the Kistnah, is from Capt. Beatson's map of Coromandel, &c. drawn and transmitted to the Court of Directors of the East India Company, in 1789. This valuable piece of geography, which we shall often have occasion to quote, contains materials for correcting a considerable portion of the course of the Kistnah river. It has accordingly undergone very considerable alterations, in the part between Condapilly and Merritch, in the present map. Capt. Beatson's survey of the Palnaud district, &c. necessarily included that of the Kistnah, to a point, more than 90 miles above Condapilly. Thence to Sooropour, or Solapour, is from authorities collected by Capt. Beatson; and from this point, to that where Capt. Reynolds left the Kistnah, near Merritch, is drawn from M. Bufsy's map, as far as it goes (that is, to the junction of the Malpurba river,) and beyond that, according to Capt. Reynolds's ideas, expressed in his map of 1784, and in his present sketch. It must however, be observed, that although I borrowed *the particular form of its course*, as above, from Capt. Beatson; yet the *direction* of it, above the conflux of the Beemah river, is changed from E N E to East, agreeable to certain notices, obtained since Capt. Beatson's work was compiled. This part of the map being still very imperfect; and yet, as the construction of it (such as it may be) must serve to regulate our ideas both of the *late* and *present* extent of Tippoo's dominions; and, of course, of the extent of the new Cessions; it appears indispensably necessary to enter into the detail of its construction.

It must be observed, that, as the latitude is wanting all the way across the Peninsula, from the western extreme of Palnaud, to Darwar; we can only approximate the parallel, by the application

of reputed distances, from certain known points on the south: nor can any use be made in this way, of Lieut. Emmit's measured line of near 100 miles, between Chitteldroog and Seergoompty; because (as far as our knowledge goes) it is unconnected with any of the southern positions.

Adoni is a point situated nearly in the middle of the Peninsula, and was adjusted in the memoir of 1788 (pages 285 and 287), at 98 Carnatic cables, or 157 G. miles, west of Ongole: and being 11 journeys from Seringapatam, through Gooty, it was placed in the latitude of $15^{\circ} 36'$; that is, very nearly in the same parallel with Goa and Ongole. But now, finding that I took Seringapatam at too high a parallel, by about 5 minutes, I have reduced Adoni, to $15^{\circ} 31'$; and have the satisfaction to find, that both Capt. Beatson and Capt. Reynolds, place it nearly in the same parallel; that is, from $15^{\circ} 27'$ to $15^{\circ} 36'$. This then, is the first point on which we rest, for determining the northern boundary, and the position of the Kistnah: for Rachore (or Rychoor) lies nearly north from Adoni, at the distance of $28\frac{1}{2}$ G. miles; and the Kistnah is 5 miles beyond Rachore. And the conflux of the Beemah with the Kistnah, is directly N of Adoni, 36 G. miles distance. These last particulars we also collect from Captain Beatson.

Gooty is then placed at 34 G. miles S E of Adoni; being 9 journeys from it, in that direction (see Memoir of the Map of Hindoo-stan, p. 285); and by Capt. Beatson, 20 cables, or about 32 G. miles. In this position, it stands in lat. $15^{\circ} 7'$.

In the next place, we approximate the positions of Chitteldroog and Darwar, in respect of Seringapatam and Merritch (the latter being a point formerly placed by Captain Reynolds, in respect of Bombay and Poonah); and then laying off Mr. Emmit's line from Chitteldroog to Beejanuggur (corruptly called by Europeans, Bisnagur), we find the latter accord very nearly with Capt. Beatson's idea of its bearing and distance from Adoni. This is conclusive enough, in a general view; but Darwar is rather too loosely placed

in respect of Chitteldoorg and Merritch ; though we have Capt. Reynolds's authority (in his late sketch) for supposing that Darwar is very near the parallel assigned it. The following is the *data* for the primary positions of Chitteldroog, Darwar, and Beejanugur ; as well as for the secondary ones of Hurryhur, Ranny-Bednore, Gocock, Kopaul, and Annagoondy ; and the courses of the rivers Malpurba and Gutpurba.

Chitteldroog is given at 70 coases from Seringapatam ; * and Darwar at 150 road miles, or 75 coases from Chitteldroog. † These 145 coases, of the Carnatic standard, are supposed equal to 232 G. miles ; ‡ but as Chitteldroog lies about 30 miles to the east of the line, the angle may shorten the distance 8 miles, and then 224 is the given distance. Darwar is said to be somewhat more than 30 coases, east of Goa ; § say 52 G. miles : Capt. Reynolds allows 60. A mean of the two, 56, places it directly south of Merritch ; which, as we have said, is a point given by Capt. Reynolds, who traced the whole road from Bombay through Merritch, to Tippoo's frontier, in 1784.

Capt. Reynolds in his late sketch, places Darwar 9 minutes S of the parallel of Goa, which is reckoned to be in lat. $15^{\circ} 29'$. The 224 miles from Seringapatam, intersect the 56 from Goa, at 6 minutes, N of Goa, or 8 different from the parallel assigned it by Capt. Reynolds : and at 79 S of Merritch ; 68 S a little west from the point where the Bombay detachment appears to have crossed the Kistnah, in its way to Darwar : this being also a point in Reynolds's route.

Concerning this last interval of distance, our accounts are not

* This and many other particulars of the same kind, we derive from letters written from the Bombay detachment by Major Frederick, and Capt. Little ; and printed in the Bombay newspapers of 1791. The particular in question is in the Bombay Gazette of May 23d, 1791.

† Idem.

‡ According to the scale of Carnatic coases, $37\frac{1}{2}$ to a degree. See Memoir of Map Hind. page 5.

§ Bombay Gazette of October 6th. When the detachment was 3 miles W of Darwar, Goa was said to be 30 coases distant.

so accurate, as we could wish: the following are the only details I have met with.

The Gutpoorba river was crossed 23 or 24 road miles S of the Kistnah: * and Col. Frederick reckons 74 more to Darwar. † The sum of these distances, $97\frac{1}{2}$, reduced to horizontal distance, will be about 72 G. miles.

Another account ‡ states, that Gocock is about 24 cofses N of Darwar: equal to 39 G. miles: and Captain Reynolds's map of 1784, gives 28 G. miles between Gocock and the Kistnah: of course, this account gives 67 only. Another way of stating it, is, Gocock 24 cofses from Darwar or 39 G. miles; the Malpurba river $23\frac{1}{2}$ from the Kistnah, or 18 G. miles; and Gocock 10 G. miles from the Malpurba, in Reynolds's map: total 67 as before. These accounts corroborate the statement of the distance between the Kistnah and Malpurba rivers, in Capt. Little's letters: but no positive information has reached me, concerning the actual distance between the Malpurba river and Gocock.

Taking then 70 G. miles as a mean of the different accounts, and intersecting it with 56 from Goa, as before, to gain the position of Darwar, it falls only 2 miles to the south of the point given by the computed distance from Seringapatam. It may be said, then, that the computed distances agree better with the interval of space on the map, than could be expected from such kind of materials.

Chitteldroog, which has been taken at 70 cofses || (equal to 112 G. miles), from Seringapatam, appears also in the map communicated by my friend Mr John Sullivan, § at 61 G. miles N E of Simogu; 33 W N W from Sirpy. Sirpy is said to be 25 leagues ** W N W of Chinna-Balabaram, equal to $65\frac{1}{2}$ G. miles; to which, if we add

* Bomb. Gaz. of Sept. 22d, 1791.

† Calcutta Monthly Register, for February 1791.

‡ Bomb. Gaz. Sept. 22. In Capt. Little's letter of the 2d September, the Malpurba river was said to be 25 miles from Gocock, and 10 or 12 cofses from Darwar.

|| See the last page.

§ See Mem. of Map Hind. page 267.

** The Modern Universal History, Vol. VI. pages 66, 67, 68, and 69, gives several distances

33. Chitteldroog by this account, should be $98\frac{1}{2}$ G. miles W N W or N W by W, of Chinna-Balabaram. Admitting that Sirpy lies in a direct line between Chitteldroog and Chinna-Balabaram, the two lines of distance from the latter, and from Simogu, overlap each other about $6\frac{1}{2}$ miles: but being better satisfied with the truth of the position of Simogu, than of Sirpy, I prefer the line of distance from the latter; shortening it 2 miles, because there appears an indication of excess, in both. Chitteldroog will then stand in latitude $14^{\circ} 6'$, and will bear from Seringapatam N $19\frac{1}{4}$ W; from Bednore E $19\frac{1}{2}$ N.

We shall now examine how far the position of Beejanuggur, in respect of Adoni; deduced from Lieut. Emmit's line of distance from Chitteldroog, northward; agrees with Capt. Beatson's ideas.

Mr. Emmit's chain of bearings and distances from Chitteldroog through Hurrylur, to Beejanuggur (under the name of Allpatna), gives N. 7° E, $69\frac{1}{2}$ G. miles; which will place the latter in latitude $15^{\circ} 15'$, and at 43 G. miles in a W S W direction from Adoni; according to the position assumed on the authorities quoted in page 5 of this Memoir. Now, Capt. Beatson in his map of 1789, places the ruins of Beejanuggur W 27 S $45\frac{1}{2}$ G. miles from Adoni; which differs only $\frac{1}{2}$ in the distance, and $4\frac{1}{2}$ degrees in the angle of bearing: and as it is evident that his bearings on the west of Rachore deviate too much to the south, this error would necessarily extend itself to Beejanuggur. But the difference of the two results, is so small, as to occasion a difference of 4 minutes only, in the parallel; which is not to be regarded in disquisitions like the present: and we may therefore conclude that the positions of Darwar, Chitteldroog, Adoni, Beejanuggur, and Cumnum, are rightly determined in respect of each other, and of Seringapatam, and Goa: consequently, that the late frontier of Tippoo on

in leagues between places in the Peninsula; many of which, from our own knowledge of their relative positions, are consistent; taking for a scale, the leagues at 25 to a degree, on a comparison with certain known distances.

the north, as well as the extent of the new Cessions ; may be delineated with general accuracy, by means of these positions.

With respect to the inferior geographical points, on which the distribution of the space, the general courses of the rivers, the lines of boundary, and the limits of the Table Land (or Balagaut) depend, throughout the northern part of the Peninsula, the following is the detail.

Tippoo's ancient frontier towards Merritch, was at 3 coses S of the Malpurba river ; or 9 N of Darwar. *

Moodgul is given at $40\frac{1}{2}$ G. miles N of Annagoondy on the Toombuddra river ; † and Annagoondy is 2 miles N or NW of Beejanuggur ; ‡ and the Kistnah is 10 to the N of Moodgul, or about 52 from Beejanuggur. The Kistnah is said to be 29 leagues from Beejanuggur, equal to 57 G. miles ; § and by its course in Bufsy's map, it appears probable. Tippoo's former boundary lies from 13 to 15 G. miles N of Moodgul, in Beatson's map, and in Reynolds's sketch.

On the S and SE of the city of Adoni, where alone, for the space of about 28 miles, Tippoo's boundary has undergone no alteration, from the cessions made to the Mahrattas and Nizam ; the said boundary is described to be from 10 to 11 miles S of the parallel of Adoni, in the beforementioned map and sketch.

With regard to that part of Tippoo's former boundary, comprised between the last mentioned part, and the south bank of the Kistnah, near Palnaud, I have adhered strictly to Capt. Reynolds's sketch. It appears however, by Capt. Beatson's map, which was constructed in 1789, that Tippoo's boundary then ran on the south of Nandyal, and east of Autcoor, as described by the dotted line of

* Bomb. Gaz. 15th Sept. Darwar was 12 coses from Manouly or Nanowly ; and Tippoo's frontier was 2 or 3 coses S of Manowly. And Gocock was 15 coses from the frontier, in Gaz. 15th Sept.

† Reynolds's sketch of 1792.

‡ Lieut. Emmir's letter of Nov. 5th, 1791; communicated by my friend Capt. Kirkpatrick.

§ In Universal Hist. Vol. VI. p. 69.

purple, in the present map : but concerning this matter, I have no farther knowledge than what is furnished by the map and sketch, in question. If Capt. Beatson is right, the Nizam's acquisitions in this quarter, are less than Capt. Reynolds describes them to be : but the reader will please to observe, that this difference of opinion, respects only the *former*, not the *present*, boundary of Tippoo's possessions, towards the Nizam.

Canoul and Rachore (or Rychoor) whose positions were not clear to me, when I drew the last map, * appear in the present one, conformable to the ideas of the two gentlemen, so often quoted ; Canoul being about 89 cofses from Ongole ; 59 from Cuddapah : 28 from Adoni ; or 133, 9 $\frac{1}{4}$, and 45 G. miles from those places respectively. And Rachore is about 28 G. miles N, a very little E from Adoni ; 98 W, northerly, from Canoul. † This position of Rachore does not differ materially from Capt. Little's report, ‡ which allows it to be 80 cofses from the crossing-place of the Kistnah, near Merritch and Ryebaug ; or about 128 G. miles : and on the construction, it is 134 $\frac{1}{2}$. If then, we add the several numbers of miles 133, 38, and 128, the respective distances between Ongole, Canoul, Rachore, and Capt. Little's station on the Kistnah ; we have an aggregate of 299 for the number of miles of reputed distance between Ongole and the crossing-place of the Kistnah ; and on the map, the space will be found to measure 294, through the points of Canoul and Rachore : a convincing proof of the accordance in the gross, of the computed, with the assumed distance, on the map.

The distance of Cuddapah from Nellore, (a point in Col. Pearse's line) rests on the authority of some documents published by my friend Mr. Dalrymple, in the Oriental Repertory ; and bearing the names of Colin Mackenzie, and W. Lennon, engineers, the date, 1788. By these it appears, that Cuddapah is 61 G. miles, west, somewhat

* See Mem. of Map. Hind., p. 286.

† In Bomb. Gaz. of August 25th, 1791.

‡ Capt. Beatson.

north, from Nellore : and being 34 leagues* to the N E of Chinna-Balabaram, through Gumipaleam, I allow 89 G. miles, which meeting the 61 from Nellore, places Cuddapah in lat. $14^{\circ} 33'$. The positions of Ganjecotta, or Gandecotta, and Tadepatry, are then fixed according to their proportions of the space between Cuddapah and Gooty, in Mr. Montresor's map ; † Gooty having been already placed in reference to Adoni, page 5 of this Memoir. This determines the lower part of the course of the Pennar river ; and the upper part rests on the distribution of the distance between Gooty and Chinna-Balabaram. Tippoo's present boundary is then laid off from Cuddapah, Ganjecotta, and Gooty, according to Capt. Reynolds's sketch.

We collect the general position and direction of the present boundary of Tippoo, towards the Mahrattas, as well as the Nizam's western acquisitions ; by the positions of Belhary, or Balhary, Annagoondy, Kopaul, Ranny Bednore, and the course of the Toombuddra river, below the latter place.

Balhary, situated about 6 miles to the northward of the new boundary, common to Tippoo and to the Nizam, is given by Capt. Beatson at 17 cosses, or 27 G. miles, to the S W of Adoni ; 21 G. miles eastward of Beejanuggur ; and 43 west of Gooty.

Kopaul is situated about 22 G. miles to the westward of Beejanuggur, ‡ and Bahaderpour 14 to the S E of Kopaul : these places forming the frontier of the Nizam's newly acquired territory on the west, towards that of the Mahrattas, in the Dooab ; and Goojindergur, situated 9 cosses to the N N W of Kopaul, is, on the other hand, the Mahratta frontier post towards the Nizam.

Ranny-Bednore on the east side of the Toombuddra river, is said to be 22 leagues (or 60 G. miles) to the west of Beejanuggur ; or

* Universal Hist. Vol. VI. p. 67.
‡ Lieut. Ennuit's letter.

† See Mem. of Map Hind. p. 282.

the same distance as Beejanuggur is, from the Kistnah : * and Capt. Reynolds, who was, probably, well informed concerning it, places Ranny-Bednore 142 G. miles, NN W of Seringapatam ; 59 N E of Bednore ; and 69 S E from Darwar ; which does not differ materially from the report of its distance from Beejanuggur.

Roydroog, although it has no share in determining the boundary, is yet a capital position, and proper to be mentioned in this place. It is given in Capt. Beatson's map, at 21 G. miles south, a little eastwardly from Balhary. I conceive, however, that it lies to the S W of Balhary ; because it is said to be 22 leagues only, from Ranny-Bednore ; or about 57 G. miles. † Besides this, a chain of distances from Ganjecotta, also assigns this westerly position to Roydroog. ‡ It says, indeed, also that Roydroog is 18 leagues, S E by S. from Beejanuggur ; § but as Capt. Beatson's distance from Balhary is likely to be right, although his bearing may not, it is probable that it should be 8, instead of 18 leagues ; and then, all will agree pretty nearly. Roydroog, is Tippoo's frontier towards the Nizam.

Hurryhur, a town on the east side of the Toombuddra, was the point at which Mr. Emmit began to trace that river, downwards, to the neighbourhood of Adoni. Hurryhur is situated about W 30° N from Chitteldroog, distant about 40 G. miles : || but its position in respect of Ranny-Bednore, is not given. I conceive Hurryhur to be 12 or 15 miles to the S E of the latter ; and apparently situated on one of the great roads, leading from Darwar to Serin-gapatam.

By the appearance of the course of the Toombuddra, below Ranny-Bednore, in Capt. Reynolds's sketch, I conclude that he made use of Lieut. Emmit's survey of it, mentioned above. It forms the

* Univ. Hist. Vol. VI. p. 69.

† Id. p. 68.

‡ Id. page 68. Tadegneri is said to be 12 leagues S W of Ganjecotta : Anantapour, 8 leagues N W by N from Ganjecotta ; and Roydroog, 18 leagues west, from Anantapour.

§ Id. page 69.

|| Lieut. Emmit's letter.

N W boundary of Tippoo towards the Mahrattas, from a point, a little above Ranny-Bednore, to the neighbourhood of Beejanugur; where the Annagoondy Circar (reserved to Tippoo, for a reason that will be given hereafter) occupies both banks of the river for 12 or 13 miles; and then the boundary finally quits the neighbourhood of the river, and proceeds towards Balhary, as before noticed.

From the Toombuddra near Ranny-Bednore, to the coast of Malabar, Tippoo's new boundary runs in a curved line to the W N W; striking the coast at about 12 miles to the north of Sedashygur, in the bay of Carwar.

On the south, the triangular space contained between the aforesaid curved line, the Malabar coast, and the province of Bednore, includes the province of Soonda; and on the north of the line, the new Cessions to the Mahrattas, in the Dooab, extend to the crest of the great western Gauts, above Goa. Of these, we shall speak more fully in the sequel.

All the places situated within the new boundaries of the Mahrattas, and of the Nizam, in the Dooab, are laid down from Capt. Reynolds's sketch. Within those of the Nizam, on the side of Cuddapah and Gooty, the places are taken, chiefly, from Capt. Beatson's map: as are those also in the north Carnatic, Guntoor, and Palnaud. Both of those gentlemen, together with Capt. Allan, have very great merit, in devoting the principal part of their leisure, as well as their hours of duty, to the service of their country.

[END OF THE CONSTRUCTION OF THE MAP.]

SECTION II.

PARTICULARS *relating to the NATURAL and POLITICAL DIVISION
of the PENINSULA of INDIA.*

THE BALAGAUT* CARNATIC, or Table Land, as it is ordinarily called, is strongly marked in the map, as being a principal feature, both in the natural and political face of the country. That portion of it which appears here, is only the principal part of a larger tract of the same nature, and of a triangular form, extending from Coimbettore, southward, to the parallel of Surat, northward: its western side skirting the Malabar coast at no great distance, and approaching nearer in the parallel of Bednore, than in other parts. On the east, it forms a very irregular line, from the south point of the triangle, Coimbettore, to a point near the Godavery river, in the eastern quarter of Golconda; approaching in some parts of the north Carnatic, within 50 miles of the sea. The north side of this triangle, is also irregular; it passes on the north of Mahur, so as to include that province of Berar, in the Balagaut; and leaves Ellichpour in the Payen Gaut, or lower Berar.† Finally, having reached the neighbourhood of the Tappy river, it conforms to its general course, westward, until it meets the western side of the

* The terms BALAGAUT and PAYENGAUT respectively mean the regions lying *above*, and *below*, the GAUTS; the word GAUT, which in a limited sense signifies a pass, through, or over, mountains, being applied in a more extensive signification to the mountains themselves.

† Capt. Kirkpatrick's MSS.

triangle near Surat. Thus this Table Land occupies 10 degrees of latitude in its length, and more than 7 of longitude, at its greatest breadth. We are not yet informed concerning its exact height, but are told vaguely that it is 3000 feet at the eastern side, opposite to Madras; unquestionably the highest part on the eastern side of the Peninsula; because from this parallel, the waters decline to the north and south; and as they universally decline to the east, we have a proof that the western side is higher than the east; and it is by far, the steepest.

This elevated tract occasions a diversity of seasons in the flat countries on both sides of it (that is, the coasts of Malabar and Coromandel), as well as a modification of them, on the very tract itself. It is pretty commonly known, that the winds in this region, blow periodically from the S W, and N E; and that each of these winds, blowing from *seaward*, occasions a rainy season on the coast that lies open to it: the cause of which appears to be, that the lofty sides of the Table Land, stop the greatest part of the clouds, and occasion them to condense and fall on the low country. But, notwithstanding, clouds enough reach the Table Land, to occasion a partial rainy season there, during the early part of the rainy season on the coast: but it seems confined chiefly to that side of the Table Land, that lies to windward: and the proportion of rain that falls above, is probably not one fourth of what falls below. The great rivers that rise on the Table Land, all of which have their springs very far to the west, are much swoln by the S W monsoon. But we are not, by any means, thoroughly informed concerning the particulars of the seasons, within this tract; or more especially concerning the extent and duration of the effects produced by the rainy season of the north-east monsoon.

The rainy season of the S W monsoon, prevails during the months of May, June, and July, on the western coast of India: and that of the N E monsoon, on the opposite coast, during a small part of October; and throughout November and December. The

rains of the former are by much the heaviest, in the Peninsula: and in Bengal, the quantity of rain is probably not less, than what falls during the same season on the Malabar coast; where, by experiment, it has been found equal to 72 inches in the year.

All the waters that are collected on this vast extent of Table Land from Coimbettore to the neighbourhood of Surat, run to the eastward; proving, as we have said before, a general declivity of the ground towards that quarter.

Between the parallels of 16 and 21, the waters decline to the *south* of east; and between 16 and $13\frac{1}{2}$, to the *north* of east; the Godavery and Kistnah being the great discharges. And again from $13\frac{1}{2}$ to the southern extremity of the Table Land, the waters run to the south of east; proving the existence of a convexity or ridge across the Peninsula, between the points of Dalmacherry and Mangalore: and in this quarter, the Cauvery is the principal discharge.

The principal rivers that have their rise on the Table Land of the Peninsula, are the Kistnah, Toombuddra, Cauvery, and Pennar: all of which, although springing from within 20 or 30 miles of the Malabar coast, yet, fall into the eastern sea, or gulf of Bengal. Of these rivers, the Kistnah, together with its sister stream, the Toombuddra, and their subordinate branches, drain upwards of six degrees extent of this upland tract. The Kistnah is taken as the general northern boundary of the tract under consideration; as lying beyond the utmost point of Tippoo's former boundary; and, of course, including the ground-work of our whole subject. The space included between the lower parts of these rivers Kistnah and Toombuddra during their separate course, is distinguished, like other tracts of the same kind in India, by the name of *Dooas*, or country included between two WATERS; a very significant term.* Within this tract, the Mahratta share of the new Cessions, is comprised; as well as a small part of the Nizam's: the remainder of

* See also the Introduction to the Memoir of the Map of Hindoostan, page cxvi.

the Dooab already appertaining to the Mahrattas and Nizam. The Mahratta share is therefore extremely compact; and being a very rich country, makes a smaller figure, in the map, than the Nizam's, or ours; which consist generally of lands less fertile and productive. Through the northern part of the Dooab, two other considerable rivers, the Gutpurba, and Malpurba, discharge themselves into the Kistnah; the latter of which, formed a part of Tippoo's original boundary; and has on or near its banks, the fortress of Badamgur, or Badammy, rendered famous in the wars between Tippoo and the Mahrattas.

Of the nature and quality of the countries in general, above the Gauts, we have not collected particulars enough, to form a just judgment, as yet: of course neither their positive nor relative value can be ascertained by any persons in this country. But the various directions in which they were traversed by our armies, and more particularly by the British detachments serving with the Mahrattas and Nizam, one must naturally suppose, should have furnished abundant matter to enable those on the spot, to do it with effect, in most places, save that angle of the Table Land, below Serin-gapatam.

Adjacent to the eastern side of the Table Land, (in the Peninsula; for our details are not meant to extend beyond it) and nearly parallel to it, in the space between the Pulicat lake and the Cavery river, a tract of mountainous country extends more than 180 miles, between the foot of the Table Land, and the level of the Carnatic; forming a number of extensive, fertile, and beautiful vallies; amongst which, those of the Barra-Mahal and Salem are the most remarkable. These two vallies are separated by the pass of Tapoor, which is composed of several long and difficult ascents, from Salem upwards to Barra-Mahal; whence, of course, the latter must be considerably elevated above the level of the Carnatic; and, in effect, it forms an intermediate step between that and the

Table Land of Mysore ; with which it also communicates, by means of several passes, or ascents : and particularly by the direct ones of *Oodeadurgam* and *Ryacota*. A second set of passes lead downwards from the Barra-Mahal, into the Carnatic. From this, and an inspection of the map accompanying, it will be easy to conceive that the possession of these vallies, from Dalmacherry to Salem, by the British and their ally the Nabob of Arcot, must necessarily cramp the measures of the enemy, in any project for the invasion of the Carnatic : at the same time that they open a ready way for us into the enemy's country. This, therefore, constitutes the first and most important of our new acquisitions.

On the south of the Table Land, and separated from it by a valley of 14 to 16 miles wide,* in the mouth of which, facing the Malabar coast, stands the fortres of Palicaud (or Palgatcherry) is another tract of mountainous country, extending, in its longest line of dimensions, in a southerly direction, and terminating in the well known promontory of Cape Comorin. The figure of this tract, may be rudely expressed by the letter T ; the upper part of which, confines the vallies of Coimbettore and Daraporum on the south, whilst the stem represents a ridge, or appenine which divides the two coasts, at the extremity of the Peninsula. The foot of the T will then represent Cape Comorin, and the extremities of the upper part of it, our two posts of Trichinopoly and Palicaud. The level, compact, and fertile space lying between this hilly tract, the Cavery river, and the Table Land of Mysore ; namely, the provinces of Coimbettore and Daraporum, comprises the whole of the country below the Gauts, on this side the Peninsula, that is left to Tippoo by the late treaty. And even this is almost surrounded by our new acquisitions of Salem, Palicaud, and Dindigul ; so that it is placed almost in the state of a *pledge*, in the event of hostility.

By what has been said, the low country on each side of the Table Land, must necessarily be confined to a comparatively narrow slip ;

* See the Memoir of the Map of Hindoostan, page 276.

and that on the west, or Malabar side, is by far the narrowest of the two: so that the streams formed by the copious rains that fall there, gain the sea too soon, to allow of a junction with each other, and thereby forming rivers of any bulk. For this reason, the incredible number of water-channels that occur on the Malabar side, render the country very inconvenient for land carriage; and, of course, for military operations on an extended scale.

I CANNOT learn, with any degree of certainty, whether amongst the Hindoos, and antecedent to the first Mahomedan conquest, about the middle of the 16th century, the term CARNATIC was applied to the whole, or only to a part of, the Peninsula of India: but I conceive from circumstances, that it expressed the whole tract south of the Kistnah, (or rather, perhaps, that branch of it named Malpurba) and was applied as a natural, rather than as a political division. The term is no doubt very ancient.

The celebrated historian Ferishta, early in the 17th century, appears to design by the term Carnatic, the whole tract that lies south of the Kistnah; (or, at least, of that branch of it named Malpurba; for amongst the upper branches of the Kistnah, that which continues to bear the proper name of the river, has a very oblique course from the NW: whilst the Malpurba, which is also a large stream, continues nearly in a line with the general course of the main river; which is from west to east). That this was Ferishta's idea, is clearly shewn by his expressly mentioning more than once, as included in the Carnatic, the provinces of Rachore, (or Rychoor) Adoni, and Bancapour: as well as some places that lie even to the north of the latter.* Ramiser (or Ramiseram) he mentions as the

* Kirkpatrick's MSS.

southern extremity of the Carnatic : possibly from his ignorance of the comparative positions of that point and Cape Comorin.

But although Ferishta may have designed the whole Peninsula by the general term of Carnatic, yet the ASUFIAH REGISTER * (of the Moguls) evidently excludes from this description, not only the countries lying beyond (that is north of) the Toombuddra river, after it turns to the N E, but also the province of Adoni, which lies to the south, both of the Kistnah and Toombuddra. So that it is probable that the Moguls reckoned the Toombuddra the NW boundary of the Carnatic ; unless we are to suppose that they made a distinction between the natural and political division ; retaining the idea of Ferishta, in a general sense, whilst in their Registers, alterations might have taken place, on occasion of throwing particular districts into one or another collectorship, either to effect a measure of real utility, or for the sake of patronage. † One fact however, is clear ; that the Moguls reckoned all, save the Dooab and Adoni, in the Carnatic : whilst we have applied the term to one of the subdivisions of it, the Carnatic *Payen Gaut* : or the narrow tract of low country, lying on the east of the Table Land.

Previous to the Mahomedan conquest, the greatest part of the Peninsula was subject to one Prince or Rajah, ‡ whose capital was Beejanuggur, (corruptly Bisnagar, and by some few travellers, called Narsinga) situated on the south bank of the Toombuddra river. This city, which was extensive and regularly built, is said (by Ferishta) to have been founded by Belaldeo, king of the Carnatic,

* This is a voluminous Manuscript, sometimes called by the Deccan writers, the *Dibbedeb* of the Deccan (i. e. the Village Detail of the Deccan) : and sometimes, the *DEPTER ASUFIAH* ; or the Register of ASUF ; that is, of *NIZAM UL MOOLEK, ASUF JAH*. It professes to exhibit in detail the revenues actually realized from the six provinces of the Deccan : and the detail of all these provinces, except Hyderahad, is, in fact, exceedingly minute ; the revenue of each being stated severally by Circars, by Mahals, or Purgannahs, and very generally, by Villages. Kirkpatrick's MSS.

† Thus Adoni being in the centre of the Peninsula, was sometimes classed under the head of Bejapour : sometimes under that of Hydrabad. Kirkpatrick's MSS.

‡ The author of "the View of the Deccan," styles this state the empire or kingdom of CARABA.

in A. D. 1344.* This situation of a capital city, almost at the extremity of a great empire, shews that it was chosen with a view to direct the attention of government towards the weakest frontier, rather than to forward the purposes of internal government. About this period the Mahomedan empire in the Deccan, which bordered on the Carnatic, was at the height of its power, under the Bahminooth dynasty, whose capital was Calberga ;† however it does not appear that the Hindoo government in the Carnatic, was subverted until the states which were formed out of the ruins of the empire of the Deccan, leagued together for the purpose of accomplishing it.‡ About the year 1567, Beejanuggur was taken and sacked, by the confederate princes ; and the king, or his representative, retired first to Penuconda,|| and afterwards to Chandegheri in the Carnatic, Payen Gaut : his kingdom fell into confusion, and in the stronger parts of the country, the Hindoo governors of provinces, became independant Rajahs or Princes, (some of whom, in the western parts, preserved their independency till the present century ; or the end of the last ; when they were imperfectly subjugated by Aurungzebe) : but by far the greatest part of the Peninsula, was reduced by the kings of the neighbouring states of Bejapour or Vissiapur, and Hydrabad, before the close of the reign of Shah Jehan. The conquests thus made, were divided into Bejapour and Hydrabad Carnatic ; by a boundary line that ran nearly along the middle of the Peninsula. One of the Bejapour generals employed in these conquests, was Sahoojee, the father of the famous Sevajee, (founder of the Mahratta state) and of Eckojee, afterwards sovereign

* Having a good deal to say on the subject of this ancient city, I have thrown it together under one head, at the end of the Memoir.

† See Memoir of Map Hindoostan, page lxxix. Also the historical and political view of the Deccan, page 2.

‡ Cesar Frederick. View of the Deccan, page 2.

|| This place is said to be 20 leagues N E of Sirpi ; 20 N N W of Chinna-Balabaram. Modern Univ. Hist. Vol. 6, p. 67. Cesar Frederick says it is 8 days journey from Beejanuggur. See also the notes to Mr. Orme's Hist. Fragments of the Mogul Empire.

of Tanjore, in right of his father. It appears that Sahoojee, after making these conquests for the king of Bejapour, held a great part of the Bejapour Carnatic in Jaghire ; * and whilst in possession of it, was solicited by the Rajah of *Madcul*, (or Madura) to assist him in his contests with the then Rajah of Tanjore. † This gave rise to the Mahratta conquests in Tanjore, and in the southern Carnatic : in the former of which, the line of Sahoojee is continued in the present Rajah : in the latter, their dominion ended by the taking of Ginjee, capital of the principality, about the close of the last century, by Aurungzebe's generals. The general of the king of Hydrabad, was the famous Meer Jumlah, who appears to have reduced the remainder of the Balagaut-Carnatic, and perhaps part of the Payen Gaut also ; and afterwards falling off from his master, transferred its dominion to the Emperor of Delhi. Capt. Kirkpatrick supposes that the conquests of Meer Jumlah were the first possessions of the house of Timur, in the Carnatic. On this occasion the name CARNATIC, is said to appear for the first time in the Mogul Revenue books.

In the Asufiah Register, the Carnatic, under Aurungzebe, was partitioned into two grand divisions ; subject to the two adjacent Soubahs or Vice Royalties of the Deccan, ‡ Bejapour, and Hydrabad (or Goleonda). The common boundary of these Soubahs originally touched the Kistnah at a point nearly midway between the two seas ; and on occasion of the new conquests, it was prolonged through the Carnatic, so as to leave a larger portion on the western or Bejapour side, than on the eastern, or Hydrabad side. For it appears to have passed from the Kistnah, near the conflux of the Beemah, by the shortest line, to the Pennar river, at the place

* Capt. Kirkpatrick's MSS.

† Sahoojee's residence was then at *Bejapour Coolbar*. (Kirk.) I am not enough master of the history, to determine, whether by this, *Colar* (as written in our maps), is meant,

1 Then divided into six Soubahs, namely, Aurungabud (formerly Dowlatabad and Ahmednagar). 2. Berar (Bala and Payen Gaut). 3. Candish (or Khandaic). 4. Beder. 5. Bejapour (only Visiapour). 6. Hydrabad (or Golconda).

where it changes from a N to an E course ; and then tracing its course upwards for a considerable distance, it struck to the S E, so as to fall on the crest of the eastern Gaus near Palamnaire ; where the Marquis Cornwallis ascended them in 1791 : from whence, proceeding southward, it followed nearly the line of the Gaus, so as to leave Barra-Mahal (or the greatest part of it) to the Hyderabad side : and then southward, assigning to the same government, the dependencies of Tritchinopoly and Volconda ; whilst those of Senkerghur (meaning the valley of Salem) remained to Bejapour. As in the Register, the countries lying between Wandiwash, and the Cavery, are styled the *conquered countries* ; and Tanjore and Tritchinopoly are mentioned as the southernmost possession of Hyderabad ; it is also probable that the Bejapour division did not extend beyond Coimbettore ; Senkerghur (or Sankerydurg) being the remotest district that I can trace ; and, like Tritchinopoly in the other division, it closes the list.

The detail of the division of the Peninsula, was as follows : The eastern or Hyderabad portion was divided into *Bala-Gaut* and *Payen-Gaut* ; the former expressing the countries above the Gaus ; that is, on the Table Land ; the latter, the low country between it and the eastern sea ; and to which the term CARNATIC, is now exclusively applied. The Bala-Gaut districts of Hyderabad, appear, as we have said, to have been the first conquests made by the Moguls in the Peninsula : and consisted, generally, of the five circars, or provincial governments of Cumnum, Sedhout, (or Cud-dapah) Ganjecotta, (or Gandicotta) Gooty, and Gurramconda ; of which, the principal parts of Cumnum, a large proportion of Sedhout, and Ganjecotta ; and a small part of Gooty, constitute the great body of the late cessions to the Nizam. The Payen-Gaut was divided into 14 circars, (exclusive of Tanjore and Tritchinopoly) of which the 7 northernmost ones of Udagheri, Serapilly, Chendaghe-ri, Kenchi, (or Conjeveram) Chingleput, Tripalore, (which included

Madras, under the name of Munderaj) and Wandiwash : had, apparently, at the date of the Register, been for some time settled under the Mogul government : for the other 7, which were the furthest removed from the seat of government, were styled *conquered provinces*. These were, namely, Ginjee, Trinomal, Vellore (which included Arnee), Palimcottah, (near the Coleroone) Warriore, Volconda ; and *Jugdeo*, which included Caveripatam. With respect to the latter, we can be under no doubt, that it meant the Barra-Mahal, or part of it, and that the name of the district as well as that of the fort of *Jegadivv*, had a relation to the name of Rajah Jug-Deo, who originally held the district. We find also, a part of the same Rajah's territories, included in the Bejapour division. By means of several names that occur in the Register, in this and the adjacent tract, we find that the common boundary of the Bejapour and Hydrabad Carnatic, lay between Caveripatam, and Ancusgurry (*Inguskurry*, in the list), which lies immediately above it on the Table Land. Together with Ancusgurry, we find Boodicotta, Congoondy, and Colar, included in Bejapour ; whilst Condour (or Condnour), Cotapolam, and Gumipaleam, appertain to the Gurramconda circar (of Hydrabad). We may therefore conclude with certainty, that the boundary touched the crest of the Gaus between the Muglee and Dalmachery passes ; from which point, we have endeavoured to trace it southward to the borders of Tritchinopoly, in the last page. *

In the Bejapour division of the Carnatic, we trace a more recent subjugation of the country, in an arrangement that appears to have arisen, either from necessity, or from want of opportunity to collect the necessary information concerning the detail. For in the first instance, we find the Bejapour Carnatic, though much larger than that of Hydrabad, † thrown together in the Register,

* All these particulars are collected from Capt. Kirkpatrick's MSS.

† All matters relating to territory, were on so wide a scale in the Mogul Empire, that even the conquests we are now describing, were considerably more extensive than our island.

in two articles only ; viz. the Bejapour Carnatic, containing 55 Mahals or Purgannahs ; and the districts dependent on it (which formed by much the largest part of the whole) in 27 Mahals. The provinces or circars of Bancapour, Moodgul, and Rychoor (or Rachore) which occupied the greatest part of the Dooab, and of course lay south of the Kistnah, and Malpurba, were considered rather as members of Bejapour *proper*, than as a part of the Carnatic. And this is shewn by a superior degree of accuracy in the detail ; for the villages in each Purgannah are enumerated ; which seems to prove, that the country on the north of the Toombuddra, had been regularly subjugated by the former sovereigns of Bejapour, and was consolidated with the ancient domains of that Soubah ; whilst the arrangements for the collection of the revenues on the south of that river, were in an indigested state. And here perhaps we may trace the reason why the term Carnatic was confined (in the Mogul revenue books) to the lands south of the Toombuddra ; that is, because those on the north of it, had been considered as a part of Bejapour ; whilst the new conquests were regarded as a part of the tract, already arranged under the head of CARNATIC, in the Register of the Hyderabad districts ; and which was an earlier conquest.

The looseness of the arrangement of the Bejapour Carnatic districts, in the Asufiah Register, may be gathered from the vast disproportion in the value and extent of the different tracts in it ; some amounting to the size of principalities, and others being mere townships : in effect, they were held under military government, and the produce of their revenue was in the nature of tribute, or of contribution. Such is the nature of the accounts in the Asufiah Register ; or that of Nizam ul Muluck.

It is uncertain whether the low countries in general along the foot of the western Gaus (in the Peninsula) were in any shape reduced, by the Moguls, at the date of the Register. If they were, they are not classed separately, like the Payen Gaut on the eastern

coast : possibly, if reduced, they were deemed too inconsiderable for a separate department, whilst such large divisions existed above the Gaus.

We are not possessed of the information requisite to describe the changes, by which the provinces in the Peninsula passed from under the Mogul government, to that of its delegates, or to the original proprietors : and from thence to Hyder Ali and Tippoo, in our own times. The reader will however find much general information concerning Hyder's conquests, and the chronological order in which they were made, in a publication intitled, " An Historical and Political View of the Deccan, south of the Kistnah, published in 1791." With respect to what happened on the virtual dissolution of the Mogul empire on the invasion of Nadir Shah, in 1739, we know little more than that the superior weight of the Nizam's power, over that of the Mahrattas, (at that period) secured him the possession of a considerable part of the Bejapour Carnatic, in addition to what became his own, by his usurpation of Hydrabad ; the whole Dooab, and the countries between it, and the Pennar river, particularly : although at a later period, the principal part of the Dooab, passed into the hands of the Mahrattas ; and from thence, into those of Hyder Ali ; from whose successor we have now seen it wrested, and by treaty formally restored to, the Mahrattas and Nizam. It is probable too, that at the dissolution of the Mogul empire, such of the principal Rajahships or principalities, as from their situation, had been but imperfectly reduced by the Moguls ; such as Seringapatam, Bednore, and others ; were immediately re-established in the families of their former princes ; from which state, we saw them gradually reduced to the condition of provinces of the Mysore empire. The Nizam, become a weaker power than the Mahrattas, suffered a greater loss of territory, by the gradual encroachments of the Mysore chiefs ; since they left him scarce a vestige of the Hydrabad Carnatic *Balagaut* ; and the *Payen Gaut* had long before been possessed by Mahomed Ali (of

Arcot) under the British influence. The late partition treaty has restored to the Nizam, as we have seen, a considerable part of Hyder's conquests in the Hyderabad Balagaut; but it has also confirmed to the Mahrattas, their former encroachments on the Nizam, in the Dooab. Such are the rights created by superior power; and which must necessarily prevail over the whole globe: but it must be confessed, that in India, the changes are much too frequent, for the comfort and happiness of the people. Since the dissolution of the Hindoo monarchy in the Peninsula, about two centuries and a half ago, the revolutions have been so frequent, that we are surprised to find in it, at present, so great a population, and so ample a revenue; and which perhaps could not have been upheld by a people less patient, or less industrious, than the Hindoos.

SECTION III.

*Some OBSERVATIONS on the POLITICAL and MILITARY ADVANTAGES
that may be derived from the new CESSIONS in the PENINSULA.*

It remains that we should particularize the districts ceded to the British ; those to the Mahrattas and Nizam being already mentioned in the course of the Memoir.* The British acquisitions are in three separate tracts or parcels ; but are, in effect, joined, by the intervention of the territories of our allies, the Nabob of Arcot, and the Rajah of Travancore. It would, no doubt, have been more convenient for us, to have possessed, in addition to the districts actually ceded, all the country of Coimbettore ; so as not only to preserve a direct communication across the Peninsula, but also to deprive Tippoo of a granary, and of resources. But it must be considered that *on the basis of the preliminary treaty*, we could take no more than we did. We were limited to a certain sum of revenue ; and we could only take such a quantity of land, as produced that amount. The question then, after the preliminary treaty was made, was only concerning the choice of situation. The first object, unquestionably, was the immediate protection and future security of the Coorga Rajah, and of the Nayres in the Calicut province ; both of whom, partly on our account, were placed in the state of rebels with respect to their old master †. Therefore

* See pages 11, 16, 17, 23.

† The reader may find several interesting particulars respecting the Coorga and Nayre countries, in the 2d number of the Oriental Repertory, published by my friend Mr. Dalrymple.

the choice of the Coorga, Calicut, and Palicaud districts, was indispensable, as it regarded justice, and national honour : an attention to which, has dignified both our councils and actions, throughout the war. It happened to be also necessary in a political view ; for the Coorga Rajah holds a pass which leads from the Malabar coast, by a short route, and through a remarkable strong country, to the neighbourhood of Seringapatam (the route taken by Abercromby). The Nayre country, on the other hand, opens to us a communication with Palicaud, or Palgatcherry, a fortress which commands the passage between the two coasts of Malabar and Coromandel, by way of the Tritchinopoly, and Coimbettore countries. * Coimbettore being in Tippoo's hands, Palicaud is of the greatest importance to us : for by our holding this place on the west, and Dindigul on the east of, Coimbettore, we render this province of little use to Tippoo, in time of war, unless he keeps a very large force there, to protect it.

The second object, in a general view, but in a mere political one, *the first*, was the possession of the Barra-Mahal, and other districts, which contain the passes between the southern Carnatic, and Mysore. (See also pages 17, 18). This tract is, perhaps, less useful to us in a defensive, than in an offensive view, in the event of future quarrels with the Mysorean : for, not to mention, that in the first instance a defensive war on our part, must inevitably ruin us ; it may be said that a defence that rests too much on the fortifying of certain passes, must be nugatory : we may *impede*, but we cannot *prevent*, the irruption of a powerful and active enemy ; so that the use of confining an enemy to a certain pass, is to know for certain where to find him. On the principle that Tippoo always has made, and if permitted, ever will make, war on us ; that is to say, by desolating our country ; and whilst he evades an attack, harasses and wears out our troops and resources ; we must lose ground in the contest. The late glorious successes of our arms, shew what

* See this Memoir, page 18.

the plans of our campaigns ought to be, should Tippoo again feel his strength: we must at all events, carry the war into *his* country, by attacking his capital, and other principal fortresses; to accomplish the double purpose of keeping him at home, and reducing his power, at the same time. In the event of a war, therefore, we should find a more direct and easy access to the enemy's country, by the centre of the Barra-Mahal, than by any route we have hitherto taken: and have our convoys also secured, by a chain of posts. We shall also, set off from a point, five marches nearer to Seringapatam, than in our last expedition: and may arrive at it, in 8 or 9 from the head of the pafs, by the way of Oussoor.

The immediate security of our own posseſſions, and that of the Coorgs and Nayres, being provided for, the remaining object of consideration, was to posſeſſ the *next useful* piece of territory to ourselves; or what would render the enemy's frontier less secure to him. Dindigul must have immediately occurred; as being the key of Coimbettore, on the side of Trichinopoly: and as having appertaining to it, a territory that projected far into the heart of the southern provinces: by the posſeſſion of which, we of course shortened our line of defence. It is an undoubted fact, that the power which presents a strong frontier, is master of the open country of his adjoining neighbour; unless an adequate force be stationed in it: so that, combining the advantages resulting from the posſeſſion of both Palicaud, and Dindigul, we may consider the Coimbettore and Daraporam countries as at our mercy, unless the enemy divides his force; a measure that would give us still greater advantages. I could have wished, however, that we had a more direct communication with Palicaud, and the western coast, than we now have: for it must be remembered, that although the districts on the Malabar coast, are subject to Bombay, yet they will from situation, always call for sudden aid on Madras: and therefore, perhaps, should be placed under that Presidency in the first instance.

And during the S W monsoon, those districts might as well be subject to Fort Marlborough, as to Bombay.

It may be said, that we may force our way across the open country of Coimbettore, to Palicaud ; which is true : but it would be more convenient to have at all times a direct communication through our own territory. And Carroor, if it could have been included within our new boundary, might, perhaps, have been a useful advanced post, from the side of Tritchinopoly : but I am ignorant of the state of its defences.

We must not overlook the immediate advantage resulting to us, from the local position of the Nizam's new acquisitions, on the N.E. By this cession, Tippoo is removed from our frontier in the north Carnatic, (Nellore, Ongole, and Guntoor) for an extent of 150 British miles : which is a prodigious reduction in our line of defence.

Many will regret that so great a portion of the Malabar coast, as the whole Canhara * province, should be left to Tippoo ; and it would certainly have been better, in other hands : but on the basis of the preliminary treaty, we could not take it (how much soever inclined), for the same reason that we could not take the Coimbettore country ; namely, that we had our full share without it. The Mahrattas certainly would not take it, in preference to a compact, fertile territory, so much nearer home ; and easier of access. They are neither a maritime , nor a mercantile people ; so that it presented no local advantages to them, equal to what the Dooab did. (See the map.)

The great distance of this province from Madras, and the impossibility of its receiving succours from Bombay, during the greatest part of the S W monsoon, would have rendered it an inconvenient possession to the British power. The northern Circars, on the opposite coast, whose geographical situation, in respect of

* The province of Canhara or Canara, contains the districts that pass under the names of Mangalore, Onore, Carwar, &c. and appears to be the Pepper country, to which the Romans traded, in the time of Pliny.

Madras and Bengal, is somewhat similar to that of the Canhara province, in respect of Madras and Bombay ; stand in point of political circumstances, widely different from the province of Canhara. The Circars are far removed from the neighbourhood of any powerful chief, and have a natural defence, consisting of waste and mountainous tracts, of great extent. Canhara, on the contrary, has a powerful enemy (Tippoo) on its very borders ; and has got such natural defences as the Circars have. It cannot be relieved by sea, at all seasons, as the Circars can : for the latter may be promptly relieved by sea from Madras, in the S W, and from Bengal in the N E, monsoon : but Canhara cannot in effect, be relieved by either in the S W monsoon. Perhaps the best transfer that could have been made of this province would have been to the families of its ancient Rajahs ; we establishing a fortified post or two in it.

It is utterly impossible, in the present imperfect state of our knowledge of the geography of the northern part of the Peninsula (notwithstanding the present improvements), to describe, with any degree of accuracy, the boundaries of the new Cessions to the Maharrattas and Nizam;* or even the positions of all the principal places,

* The particulars and value of the Cessions made by Tippoo, are as follow :

<i>To the East India Company.</i>	<i>Koontceary pagodas</i>	<i>To the Mahrattas.</i>
Calicut and Pallicandcherry	9,36,765	In the Doab, being the Circar of Bancapour, with part of Moodgul, &c,
Dindigul, Pyalny, and Verapachiry	90,000	13,06,666
Salem, Koont, Namcool, and Sun-kagherry	88,000	In Gooty, the district of Sundoor + 10,000
Ahtoor, Pirmutty, Shadimungul and Vayloor	68,000	<hr/> 13,16,666
Barra-Mahal, Raycotta, Darampoory, &c.	1,34,000	
	<hr/> 13,16,765	
		<i>To the Nizam.</i>
		Kerphah (or Cudidapah) Cum-mum, Ganjccotta, and Cansul - 9,71,390
		In Gooty - 51,782
		In Adoni (Mooka) - 12,162
		In the Doab, being parts of Rachore, and Moodgul 2,81,332
Total of the Cessions about 39½ lacks of pagodas.		<hr/> 13,16,666

† The geographical position of this small district, has not yet been ascertained, so that

situated within them. A very good *general idea*, may however be collected from the map ; sufficiently to understand the comparative extent and situation of each tract ; and combining with this, the value of each, their comparative fertility and population may be inferred. As to the value of the territory left remaining to Tippoo, we have no absolute *data* for making the calculation : but from appearances, one might be led to conclude that he had retained the largest share. And if he really did so, through our misapprehension, the Mahrattas' and Nizam's officers are blameable for their want of observation, in those parts of the country, which they had explored : and for want of which local knowledge, our commander in chief could have no means of forming a judgment of the real or comparative value, of the greatest part of Tippoo's dominions.

One circumstance strikes us very forcibly, and that is, the small extent of the Mahratta share in the map. There is little reason to suppose that any considerable error has arisen, in the arrangement of the positions, on which the geographical construction of that tract depends ; namely, Darwar, Kopaul, and Ranny-Bednore, in pages 7, and 11. And yet the whole Mahratta share (10,000 pagodas, or about the 13rd part of the whole excepted) is included in the Dooab ; and that on the west of Kopaul. So that the country must be exceedingly fertile and populous : and indeed, Lieut. Emmit's account of the country along the banks of the Toombuddra, proves it. His words are, " I have found the banks " of the river, [Toombuddra] amply stored with towns ; many of

Tippoo's whole revenue was taken at 79 lacs, or double the sum of the cessions. It appears that these pagodas, termed *Koontary*, in the copy of the original treaty, sent to England, are rated at three rupees each, and no more : for we are told in the London Gazette of Nov. 3d. 1792, that the sum total of Tippoo's revenues was taken at 237 lacs of rupees ; of which, a sixth part, equal to 39½ lacs, is stated on a former occasion to be the value of the British acquisitions. The Oriental Repertory (No. II. page 231) also assigns the value of three rupees to a koontary pagoda. The term itself appears to be provincial ; as koontary coins are also in use, in Mysore.

If the rupees are reckoned at 2s. 1d. each, which I apprehend to be their full intrinsic value, the sum of Tippoo's net revenue will be under two millions and a half sterlring ; or more precisely, £458,700. Of course the annual revenue of the British acquisitions will be £11,450L

"them respectable." And again, "I have passed the following towns, which are the largest of the vast number I have met with;" and he then enumerates ten of them, in the space of less than 70 B. miles. The Mahratta share in the Dooab, appears to contain 7962 square British miles, the revenue of which is taken at 411,450l. ; consequently, each square mile is worth to the state *per annum*, near 52l. or *per acre*, about 1s. 7*1/2*d. If we take Tippoo's ancient territory at 98,000 miles, and reckon the revenue at the sum fixed by the preliminary treaty, it would amount to about 25l. only per mile. The land tax of England and Wales, may be about 33l. per mile. But it must be taken into consideration, that in the Peninsula, the land tax represents the revenue in general ; in England, it is less than one-eighth of the whole.

The British acquisitions may be reckoned 15,370 square miles ; and the Nizam's 12,750.* In our share, we have a great deal of

* Here follows a particular statement of the number of square British miles, contained in the several political divisions in the Peninsula : taking for its N W boundary, the Malpurba River, as far as its course is known ; and from that point, which falls in the parallel of 16°, an imaginary line along the parallel, to the western coast. The Area of the whole Peninsula, according to the present improved state of its geography, taking the Kistna and Malpurba Rivers for its northern boundary, is about 167,911 square British miles.

Of these, Tippoo heretofore possessed	98,090 **
His Cessions to the	36,081
British — — 15,374	
Mahrattas — — 7,962	
Nizam — — 12,745	
Remains to Tippoo	62,009
BRITISH POSSESSIONS AND ALLIANCES.	
New acquisitions	15,374
Guntur-Circar	3,779
Jaghire	2,436
Total of BRITISH POSSESSIONS	21,589
Carnatic and Tanjore	44,297
Travancore and Cochin	9,376
Total of BRITISH ALLIANCES	53,673
TOTAL OF BRITISH POSSESSIONS AND ALLIANCES	
Acquisitions of the Mahrattas and Nizam	75,262
Ancient possessions of the Mahrattas and Nizam collectively (the common boundary of the two states, not being well defined), together with the territory of Goa, &c.	20,707
	9,933
Total of the Peninsula in square British miles	167,911

* Under the old construction, Tippoo's territory was taken at 97,650 ; or about 440 square miles less than the present calculation. See Mem. of Map Hind. page cxxxix.

unproductive land. The Coorga district and the parts adjacent, are little better than a mountainous forest : and as I am informed, there is found generally, on the south of Goa, a tract of the same nature, lying above and contiguous to the western Gauts ; and extending from 20 to 30 miles eastward. This forest even extends within 36 or 40 miles of Seringapatam. In the Barra-Mahal and Dindigul divisions, there must necessarily be a great proportion of waste land. I conclude also, from what I have heard, concerning the Cuddapah country, that the Nizam must have considerable tracts of the same kind of land in his new acquisitions : so that it is probable that the Mahrattas have acquired a more fertile tract than ordinarily occurs, in Tippoo's dominions.

It may be expected that I should state, from the materials afforded by the Asufiah Register, the sum of the revenue yielded by the several districts in the Peninsula ; at the period of its compilation. This I was much inclined to do, until by a close examination of that head of it which includes the Bejapour Carnatic, it appeared clearly that very great errors had crept into it : insomuch, that if the sum total of the revenue of such districts as are known to have been in Tippoo's possession, be admitted as it stands in the Register ; his whole territory, must have produced considerably more on each square mile, taking one with another, throughout, than we have calculated for the produce of an equal space, in the Mahratta share of the Dooab : which, considering what we really do know, and have already remarked, concerning the productive state of the Dooab, and the inferior quality of the lands in the southern parts of Tippoo's late territories ; is utterly impossible. To this we may add, that Mr. Fraser's statement of the revenue of the Soubahs of Visiapour and Hydrabad collectively (in Aurungzebe's time) falls very short of the sum at which the lands which composed the whole of Tippoo's territory, are rated, in the Asufiah Register.* and of these Soubahs, the Peninsula constituted only a

* Fraser's Nadir Shuh, page 34.

part, though by much the largest. This may serve to shew, that the sums allowed for the revenue of the Bejapour Carnatic, in that Register, are wholly inadmissible: but what the real truth is, we have no rule by which we can determine. Nor can we reason from analogy: for whatever may be the comparative state of the two countries of Bengal and Mysore, as to fertility and prosperity (were we able to ascertain it), we should yet want a perfect knowledge of the system of collection, and the rate of taxation, throughout Tippoo's country; in order to form an estimate of its revenue, by a comparison of its extent, with that of Bengal.

The author of the View of the Deccan appears to have gone into the other extreme: and although he came much nearer the truth, than the Register did (which has probably been corrupted, in the numerals of the sums, in the Bejapour Carnatic), yet that he has under-rated the territory, is manifest, by Tippoo's admitting a sum total, that went 47 lacks of rupees beyond the author's calculation.* In the View of the Deccan, the 4th, 6th, and 8th articles alone, are collectively valued at about 41 lacks of rupees, less than they were taken at, by the Allies, to whom they were ceded; allowing three rupees to each pagoda.† The 6th article,

* Tippoo admitted 237 lacks of rupees: (See London Gazette of Nov. 3d, 1792) The author of the View 190 only.

† Statement in the View of the Deccan, page 7 to 15.

lacks of pagodas. lacks of rupees

1.	Mysore	—	7 (Hoons)	—	—	27
	{ Coimbettore	—	—	—	—	19
2.	Bednore	—	7 (Ikeri)	—	—	28
3.	Soonda	—	2	—	—	8
4.	Malahar	—	5	—	—	19 †
5.	Barra-Mahal	—	—	—	—	5
6.	Countries west of the Hendery and Toombuddra Rivers, including the Doobab	—	—	—	—	16
7.	Bejapour Carnatic	—	—	—	—	32
8.	Hydrabad Carnatic	—	—	—	—	29**
9.	Part of Adoni	—	—	—	—	7
						190

† Calicut and Palicau'd were taken at more than 9 lacks of pagodas. See note page 32.

|| Doobab taken at 16½ lacks of pagodas.

** Much less than the whole of this article was taken at more than 9½ lacks of pagodas.

in particular, is estimated at 16 lacks of *rupees*, only: whereas, the Mahrattas and Nizam admitted a produce of more than as many lacks of *pagodas*, for the lands that were ceded to them, in the Dooab; which formed only a part of the 6th article: Roydroog, Chittledroog, and Herpanelly, included in the same article, and which remained to Tippoo, would have swelled it considerably more.

Candour requires that I should also notice my own error, in the estimation of Tippoo's revenue; which in the Memoir of the Map of Hindoostan, 1788, page cxxxix, I took roundly at 400 lacks of rupees per annum. It is no doubt a great deal less: but it would be presumption in me to attempt to fix a standard for it, when others who possess a more extensive knowledge of the subject, have evidently failed. Nor should I now have ventured so far on the subject, had those with whom it lay ultimately to determine, possessed the means of examining personally into it. It must moreover, be recollect, that the treaty was made, not with the deliberate leisure that Commissioners enter on such a business, during a long interval between two campaigns; and in which, delay is often studied on both sides; but in the very midst of an arduous contest, when the army of our effective ally was absent, and its return uncertain: and finally, we must recollect, that whatsoever the value of the cessions might be, both of our allies were satisfied with them. For the allies gave up a calculation of their own, of 260 lacks, and accepted one of 237;* so that it appears on the face of the transaction, that although the claim established by the treaty, was one half of the revenue, yet that it was judged more prudent to negotiate the sum at which that half was to be taken, than to prefs a particular statement on the enemy. If therefore it be admitted that Tippoo kept more than half, yet it appears that the allies

* See London Gazette of Nov. 3d, 1792.

thought him sufficiently reduced : and if this was really the case, their original purpose was accomplished.

The extermination of the Mysore power, would not have been sound policy ; although a reduction of it was necessary ; and the extermination of Tippoo himself, a desireable object. But as the events of war are uncertain, it appears to be the best policy, to make peace when *good terms* can be obtained : without risking a great deal, in expectation of *better*. I hold it pretty certain that if the siege had been prosecuted, Seringapatam must have fallen : but it is not so certain that the fall of that place would have *ended the war* ; which at all events, was a principal object, where public gain and loss are calculated. In the present case, the gain (the plunder of the place) would have been to individuals ; the loss, (the effect of delay) to the state. As the matter stands, both have acquired very liberal advantages : and perhaps, on the whole, that was the best partition treaty, which made the Mysore sovereign, one of the parties in it. Besides, a brave man, rendered desperate, is capable of doing great mischief, although he may fail to extricate himself from his situation : and it is certain, that men have been saved, merely by their having been urged on to desperation, by their enemies.

The number of forts in the Peninsula, is almost incredible. Accordingly, our acquisitions have brought us a great many of them, of which, some must be garrisoned, many dismantled. In other respects, our acquisitions, those on the Malabar side excepted, make no other difference than removing our frontier to a *greater* distance ; and by no means to an *inconvenient* one.

The relief afforded by the removal of Tippoo from our northern frontier, allows us to make greater exertions in the south ; where his sphere of action is now so narrowed and exposed, that every design against us, in that quarter, must be undertaken with disadvantage. And we most sincerely hope, that his recent experience of

our ability to distress him ; together with a consciousness of comparative weakness, in himself, since he began the contest ; will induce him to keep that faith, which a state of prosperity and strength too often leads to a breach of : even amongst those who affect to act under the influence of a milder religion, and purer morals.

SECTION IV.

*Of the SITE and REMAINS of the ancient CITY of BEEJANUGGUR.**

THE remains of this city have been visited by an English officer (Lieut. Emmit) so lately as November last. They are situated on the south bank of the Toombuddra River, directly opposite to Annagoondy, which lies about two miles from the north bank ; and is at present the principal town of a small district of the same name ; the one being the Jaghire (or estate), the other the place of residence of, the descendant of the ancient kings of Beejanuggur, who about two centuries and a half ago, ruled the greatest part, if not the whole of the Peninsula ; under the title of the empire or kingdom of CANHARA." The following is Mr. Emmit's account.

" On the N W side of Comlapour fort, distant half a mile, there are a great number of rugged hills covered with pagodas, which have once been very beautiful. This place has been inclosed in strong stone walls on the E side, and bounded by the river on the W. The circumference of the whole, appears to be about 8 miles, though I was told much more. Betwixt the immense piles of rocks crowned with pagodas, I traced several streets from 30 to 45 yards

* In the Memoir of the Map of Hindoostan, this name is corruptly written *Bijinagur*. Beejanug-gur, is Capt. Kirkpatrick's orthography of it, and Bejenagur, that of the author of the View of the Deccan. In Cesar Frederick, and in most of our Histories, it is written Bis-nagar.

wide ; some of them now producing fine rice. There is one street remains pretty perfect : it is near the S W angle of the bounds. It extends about N E and S W half a mile ; and is about 35 yards broad ; having colonnades of stone on each side, and a very large pagoda at the S W end, in perfect repair. On the west side of this street, there is a large mango grove, which is bounded by the Toombuddra. There are a number of streams through these ruins, that have formerly been employed to fill a great number of canals, the remains of which, appear all over this once delightful place. I enquired of a number of people, the name of this place ; all of whom told me it was called ALLPUTNA. The river at one place, at the foot of these ruins, is only 16 yards wide ; below which there has been a stone bridge.

" Comlapour is surrounded with hills. After leaving Comlapour, the road winds betwixt high hills ; and in many places leads over considerable heights, the ascents and descents of which are paved with large stones. This road continues $8\frac{1}{2}$ miles from Comlapour ; where it enters betwixt two hills, and is not more than 8 feet wide, paved with stones. Here are the remains of a stone gateway, and a watch-house, on the top of a hill, on the east of the road. After leaving the narrow road, the country opens, &c."

According to my friend Capt. Kirkpatrick, Allputna, or Awlputtan, as he finds it written in the Persian character, is the same with Beejanuggur : but it appears odd that the people on the spot should not call it by its original Hindoo name. As Capt. Beatson, two years before Mr. Emmit wrote, had, on the authority of the natives, placed Beejanuggur in the same situation as Awlputtan falls, by Mr. Emmit's observations, there can be no doubt but that the ruins found by the latter, are those of Beejanuggur ; besides which, we have the authority of the author of the View of the Deccan, for its being centrical to the district of Annagoondy. [View of the Deccan, page 14.]

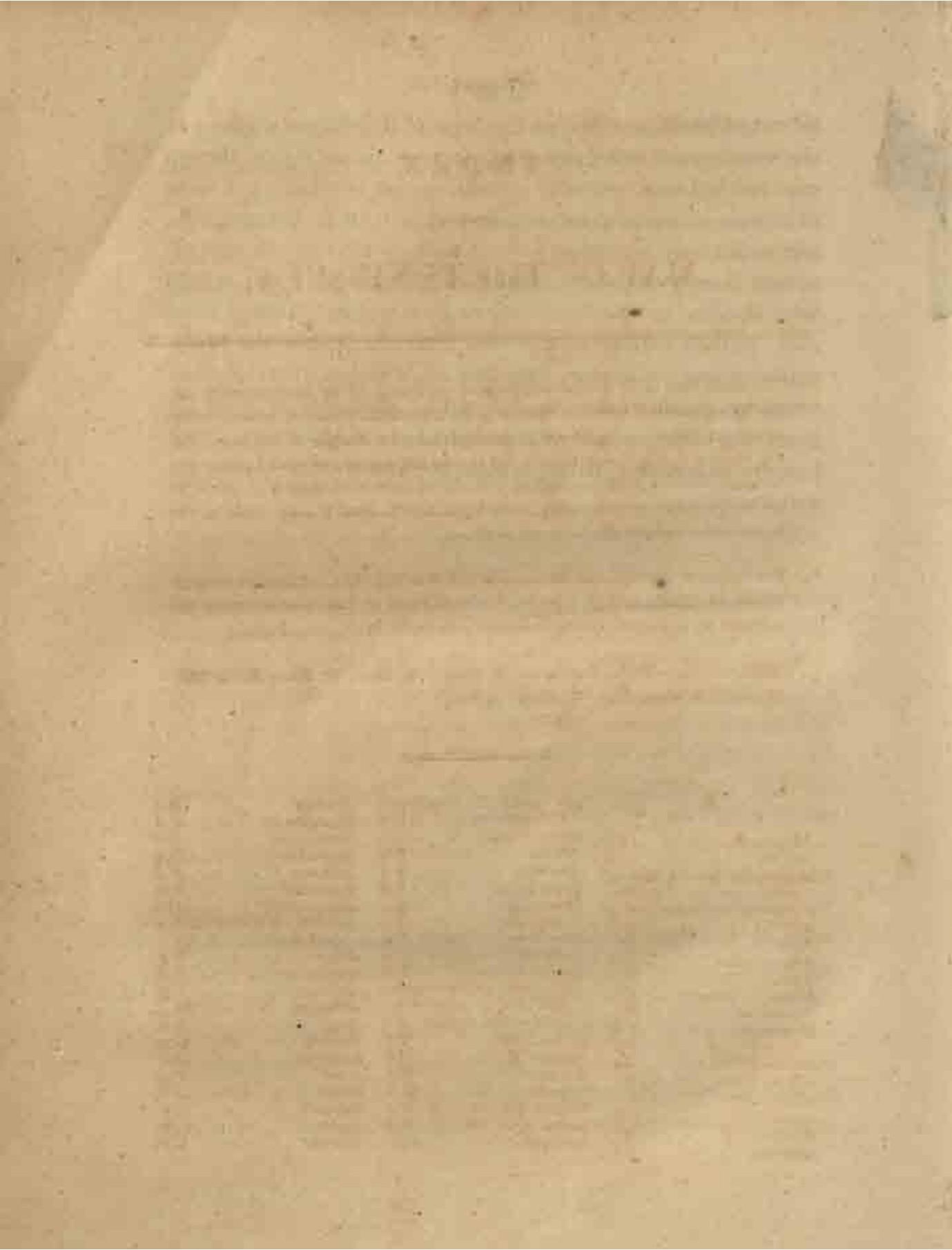
We learn from Cæsar Frederick, who visited Beejanuggur in 1565, that it had a circuit of 24 miles; and that it contained within it, a number of hills and pagodas. So that the hills or rocks crowned with pagodas, which were supposed by Mr. Emmet to be situated beyond the boundary of the ancient city, as well as the paved road leading from Comlapour to the pâls; appear to have been within the boundary; and the gate itself, was probably one of the gates of the city.

I conceive that the reason of Tippoo's wishing to retain the cir-car of Annagoondy, instead of giving it up to the Nizam or the Mahrattas, in common with the rest of the lands in the Dooab, was for the accommodation of the descendant of the ancient kings of Beejanuggur; whose present narrow domain consists of the above cir-car, which includes the site, and scanty remains of the ancient capital. As we ought ever to suppose a good motive whilst appearances warrant it, Tippoo deserves great credit for his conduct on this occasion. To explain my meaning more fully, I shall transcribe a passage from the *View of the Deccan*, published in 1791; and long before the event of the late war could be foreseen.

"Annagoondy claims notice rather from commiseration to the circumstances of its owner, than any political consequence it can be of, in the scale of Tippoo's power. This petty principality, which scarcely extends 20 miles around the spacious ruins of the famed city of Bejenagar, once the capital of the Hindoo empire of the same name, comprehending all the countries south of the Kistnah, is the wretched remains and inheritance of dominion, left to the lineal descendant of Ramraje, the last great monarch of the Canarine and Malabar nations, united 700 years before, under the rule of Kishendeo. The representatives of this family, like the ranas of Oudeypour in Hindostan, lost with their dominions, the superior designation of Maharajah, or Rajah; and have for a century past, been distinguished in the Deccan generally by the title of *Rayeel*. They are said still to keep an exact register of the revo-

lutions which happen within the circle of their former empire ; in the vain hope of being reinstated in their ancient rights, though now reduced to a territorial income of about two and a half lacs of rupees, inclusive of the regalities of a mint at Annagoondy ; and which they are rather suffered to enjoy through the compassionate bounty or policy of Hyder and his successor, than to hold with absolute independence in their own power. Trifling however, as their revenue is, and how little the merit of the Mysorean's conduct, it is more than they could expect from the exterminating system of the Moghul and his delegates, or from the avaricious principles and national hatred of the Mahrattas, if they had the misfortune of falling within the grasp of either of these governments."

*
F I N I S.



INDEX

TO THE

MAP OF THE PENINSULA.

63 The whole Map being divided into Squares, or Spaces, by the Intersections of the Parallels of Latitude with the Meridians, each particular Square is pointed out by Letters of Reference, alphabetically arranged along the Margins of the Map; the side Margins having capital Letters, and the top and bottom ones small Letters. For instance, the City of Madras is given in the Index under the Letters E h : and if the eye be guided along horizontally in the Map, from E, until it comes under h, the Square which contains MADRAS will be found.

* * The Names of Countries, or Nations, are in Roman Capitals; and those of Princes, Rajahs, or Chiefs, in Italic Capitals; and such Places as have their Situations described in the Index only (owing to want of room in the Map), are in Italics.

††† Abbreviations.—Terr. Territories. I. Island. R. River. Pt. Point. Mt. or Mts. Mountain, or Mountains. G. Gant, or Pali.

A.

		<i>Ambravatty R.</i>	It passes by.		
Achampatta	B f	Carroor	H f	Anjeng ^x	K d
Acharly	C e	Ameenbhauz	C c	Annagoondly	C d
<i>Adam's Bridge.</i> A bank of sand extending from Ramseram to Manar	I g	Aminta	B b	Anrogurry	G f
ADONI	C e	Amutnur	F d	Arachenoor	G g
Adoni	ib.	Anansagur	B d	Arakeery	F d
Adriampetam	H g	Anampilly	C e	Arunbauk	E h
Agnada	C a	Ananpoor	E c	Aravacourchy	H e
Ahtore, or Attore	G f	Anantpour	D e	<i>ARCOT, NABOB of,</i> See CARNATIC.	
Akarampet	E h	Anchitty	F e	Arcot	F g
Alemparre	F h	Ancola	D b	Arcotar	G d
Alenagur	C g	<i>Aucusgurry, or Ingusgurry.</i>		Ardingay	C g
Algoondy	B c	It lies to G. miles to the N W of Kistnagherry	F f	Ardingay	H g
Allumcollam	K e	St. Andrews	I d	Areg	B c
Allumbuddy	F e	Anecour	I e	Ariclore	G g
Alorno	C b	Angamale	H d	Armen	D h
Ambajecdurz	E f	Angedive	D b	Attore	F g
Amboor	E f	Angulti Bednore	E e	Aujypata	G f
		Anical	F e	Avaco	C f
		Animally	H e	Autcoor	C b

INDEX TO THE

B.

Baccanore	E b
Baddammy, or Badamgur	B c
Baderly	B b
Badramangoody	E d
Bahadernagur	C d
Bahatracally	I d
Baigumspilly	C f
Balegaud. The TABLE LAND, or Tract situated above the Gauris. See also Payen Gaut.	

Balhary or Balhary Great C d
— Little C d

Balelcroydroog F c

BANCAPOUR C c

Bancapone Sanore D c

Bandem C b

Bangalore P e

Bankipour E c

Bapatia C h

Barcelore E b

Bari B b

BARRA-MAHAL P f

Batoor E b

Battlegunta H e

Bauglore F f

Baypour G c

Bedispollam E i

BEDNORE E c

Bednore ib.

Beejamuggur, ruins of C d

Beemah R. C d

Bellore F d

Beindgeera C c

Bejspour, the same as Visiz-

pour A e

Bellhary, or Balhary C d

Bellumconda B h

Beltangaddy F c

Benavéram E d

Berapour B b

Berowly B b

Berlpour F d

Bezoora B h

Bicholim C b

Bilghey D b

Bilgilly S c

Billipatnam G c

Billiancotra H c

Biywapour C f

Bodewal D g

Bomesuze E g

BONSOLO B a

Boodicotra P f

BOOL or BUL F c

Bovincorl G c

Bowany R. F c

Brinjain K c

BRITISH POSSESSIONS
and ALLIANCES. I d

to B h

— NEW CESSIONS to,

In Barra-Mishal P f

In Calicut G c

In Dindigal H e

— ANCIENT POSSES-

SIONS.

Jaghire in the Carnatic E h

Guntoor Circar B h

Buddra R. See Toom.

Bunnoo, or Buuntre C d

Buntwal F c

Buranchery H d

C.

Cabo E b

Calacad Ke

Calastri E g

Calicoulan I d

CALICUT G c

Calicut ib.

Callacoil I f

Callagoody I f

Calliondroog D e

Calpenteen L Kg

Calupar I e

Calway D g

Calymere Pt. H g

Canugeri C g

CANHARA Eb

Cankanelly F c

Cannanore G c

CANOUL Cf

Canoul C e

Caranpoondy B g

Carical H g

CARNATIC C g

Carnatic Gur F g

Carongoly F h

Carpour G g

Carricoodroo Ch

Carroor H f

Carroor E d

Certinad, or Cartinaddy. G c

A Rajaship, situated be-

tween Tellicherry and Ca-

licent. Cotapour is the Ca-

pital. G c

Carunapady Id

Carwar D h

Carwarep Ch

Carwares D g

Carval F c

Caudamatria Kh

Cavery R. Source F c

Mouths G g

Caveripatam

F f

Cavrepauk

F g

CESSIONS from TIPPOO

SULTAN to the BRI-

TISH, G e, F f, H e. To

the MAHRATPAS. C c.

To the NIZAM. C d, D f

CEYLON K h

Chandegheri E g

Changamah F f

Changlamara C f

Chappally C e

Chattricul D d

Chedima-Conda D g

Chennapatam F e

Chemoor D f

Chennoypatam F e

CHERCUL, or CHERICA. F c

This country extends from

Decla, or Deckul, to Can-

narus; its capital is Bil-

Hapatum.

Chevalpettore I e

Chiandergheri F c

Chillacallopoor B h

Chillumbrum G g

Chinamper I f

Chinchinnilla C f

Chingleput F h

Chinna-Balsaram B e

Chintagooduma B f

Chintapilly B h

Chintapoleam B g

Chintaminpet H f

Chiracole C a

Chirawalla C f

CHITTELDROOG D d

Chitteldroog ib.

Chittel Psfs D g

Chitteput F g

Chittoor E g

Chitwa H d

Chitwal D g

Chorlem C b

Chowdypollam G e

Chowgut H d

Chueksgherry. The same as

Sackergherry H e

COCHIN H d

Cochin I d

Codwal C c

Coilurepetta I f

Coilpetta I e

COIMBETTORE H e

Coimbettore ib.

Colamangalum H e

Colunelly G e

Colangoody H d

COLAR E f

MAP OF THE PENINSULA.

47

Colar	E f	CUMMUM	C g	Elaour	I e
Colaroon R.	G g	Cummum	ib.	Elatone	B h
Coleche	K c	Cundimahally	F d	Ellore	B i
Coloor	B h	Cunarter	I d	Elorensem	E d
Colour	E e	<i>Curralnour.</i> The same as Carrinad, which see	E d	Elitor	G e
Combiconum	H g	Cuttigalls	D f	Eratore	P d
Comery	J f			Erotah	G d
Cometsa	D e			Erost	G e
Compey	E c				
Comerin Cape	K e				
Condacour	C s				
Condapilly	B n	Dallycotta	H e		
Condavir	B n	Dalmathery	B g	Fringyper	F c
Condil	C b	Damicotta	G e	Feroakamal	G e
Congoondy	F f	Dammipaddi	H f		
Conjeveram	F g	Danyincotta	The same as Damicotta		
Conjuvere	F h	Darampooy	F f		
Conniscombray	K e	<i>Daraporam.</i> The Province situated on the south of Coimbettore; having a capital of the same name	H e	Gadibunda	B e
Coolbar (Balzpour) sup- posed to be intended by Colar	E f	Daramporam, Great	H e	Galgalia	B e
COOMLY	F c	Daramporam, Little	ib.	GANJECOTTA	D f
Coontah	D b	Darmaveram	D e	Ganjecotta, or Gandiscotta, ib.	
Coondapour	E b	Darwar	C b	Gauti. The edge of the Table Land, from the front of Goa, to Coim- bettore, and Palnaud.	
Coonigul	E c	Daupilly	B g	St. George	I d
Coonoor	F d	Daywurconda	B f	St. George's Islands	C s
COORG, or Coorga	F c	Deela or Deckul	F c	Gheriah	B z
Coortallum	H f	Deigoody	D f	Gingee	F g
Corchair	C g	Denkina	F e	Gia	C z
Coral	E c	Deodungur	B e	Gocock	B c
COROMANDEL	F h	Desmella	E e	Gondegama, or Gonlatum- mum R.	C g
Cotapur	G e	Dejatla	E f	Gonjenpilly	D h
Cotate	K e	Devicotta	G g	Goodlatore	I e
Cotiate. A Rajahship situ- ated on the east of Tell- cherry. Cotyanguary is the capital	G e	Dewghur	B a	Goojala	B e
Cotta	G c	Dhoor	D f	Goondipaleam	B a
Cottapatam	I g	Dilia, M.	G c	Goondul	G d
Cottapilla	E e	DINDIGUL	H e	Goorzala	B g
Cottapollam	C b	Dindigul	H f	GOOTY	C e
Cottapollam	E f	Divy Pt.	C i	Gooty	I b.
Cottapooloor	E h	Donyoul	C e	Gopalchity	G e
Cottaseveru	D e	DOO-AB	C c	Governdungurry	D b
Cottacotta	C f	Doornal	B g	Gramnum	F d
Cotyanguary	G c	Dormal Pali	D g	GUDUCK	C c
Coulam	K e	Dupand	C g	Gujelhatti G.	G e
Coulan	K d			GOOJINDERGUR	C d
Coulanda	G d			Geojindergur	I b.
Covelong	F h			Gumipaleam	E f
Covyporum	G e	E		Gungaveram	D z
Courgegur	E d	Eaurot	G g	GUNTOOR	B h
Courtallum	K e	Edgher	B e	Guntoor	I b.
Coulydroog	E c	Eelul. A district on the north of Chervul.	F e	Gunjecotta or Ganjecotta	D f
Cranganore	H d	Eeroor, The same as Illa- core	F c	GURRAMCONDA	E f
Cuddalore	G g	Elaonda Mts. They di- vide the Nilore and Chit- tel districts	D g	Gurramconda	I b.
CUDDAPAH or SED-				Gutigui	B d
HOUT	D f			Gutpurba R.	B c
Cuidspah	D f				
Cullumahallum	H e				

INDEX TO THE

H.

Hampet	H g
Hawanoor	C e
Hegettencott	P d
Hendery R.	D d
HERPANELLY	D c
The position of the Town of this name, not known.	
Hillegurry	E d
Hogenpeur	E d
Hoobly	C c
Hoolenturgam	F c
Hooly-Onore	E c
Hosangry	E b
Hurdonelly	G e
Hurrylur	D c
Huttany	A c
Hydergur	E c
Hydrabad	A f

Kisnegeri	F f
Kitospatam	D h
Kittaporum	B g
Kittoor	C b
Koosgul	C c
Kooshalmagur	F d
Kopaul	C d
Kumilspour	D i
KOUMHUL.	The name as COOMLY
	F c

L.

Lingalla	B f
Lingalla Peintilly	C f
Lingumpilly	D e
Lolgeery	C c
Lackritupilla	D f
Lackrycotra	H d
Luckmaseer	C c

I. J.

Jafnapatam	I h
JAGHIRE, E. I. Company's in the Carnatic.	E h
Jubehaul	C d
Jegadivy	F f
Jemalmuttoo, or Jemalmu- tnag.	D f
Jiacore	F c
Inzakerry, or Anasugary 10 miles N W of Kisttag- hery	F f
Injamour Conda	D g
Incaconde	B g
Intour	D e
Inspols	C f
Jyeghur or Zyghur	A a
Up this River, the Bombay detachments landed.	

K.

Kaval, or Cawal,	F c
Kaiypt	D f
Kanamhaddy	F d
Kaneekgurry	C d
Kellineelicotta	H g
Kerpeh. The same as Cun- daph	C f
Kirroo	B c
Kilkare	I f
Kienoor	H f
Kistnah R.	B c
Mouth of	C h
Kiamberam	D f

Macherla	B g
Madgurry, or Mudgurry	E c
Madogary	H e
Madoot	F c
Madras	E h
MADURA	I f
Madura	I f
Magalaconda	E f
Magalawankel, or Malwan- kel	E f
Maggeri	F c
Mahic	G c
MAHRATTAS, new CES- SIONS to	C c
Mahravezedurgam	F f
MALABAR	H c
Malakerry	F e
Malbury	B c
Mallesindrum	G f
Malletur	H d
Malpurba R.	B c
Mallyoor	H f
Mahawankel	E f
Mallyoor	H s
Mamalgeri	I e
Manapur	K f
Manar I.	I g
Mancaseram	F b
Mangalore	F b
Manganuda	H d
Mangrecota	H d
Manorgoody	H g
Manouly, or Nanouly	C c
Maratcollam	G c
MARAWARS	I f

N.

Naggery	E g
Nagore	H g
Nail	E h
Nakarskul	B g
Namcool	G f
Nandedurg	E c
Nandyama	B h
Nandyaul	C f
Nanouly, or Manouly	C c
Narmavaram	B g

MAP OF THE PENINSULA.

49

Mattam	H f	Pallicode Pais	P f	Pudela	C s
Navapour	E b	PALNAUD	B g	Pulcumur	C s
Naugamungulum	P d	Panamgoody	K e	Pulicate	E n
Naughtmady	D e	Pan-aur R.	F g	Pulny, or Pyalny	H e
NAYRES. The people of the Calicut province, ge- nerally	G c	Panella	A c	Pungahore	B f
Negapatam	H g	Paniamy	H c	Purgot	G d
Nellsuram	F c	Pannyellumcratch	K f	Purrawuttrum	B f
Nellore	D g	Papanafsum	K c	Pyalny, or Pulny	H e
Nengengoode	E d	Parengoody	I f		
Nerinjapetty	C c	Parmilla	G c	Q.	
Newfee	C a	Paroor	H d	Quilandy	G c
Nilgoonda	A g	Patinoor	I f		
NAZAM ALLY. CES- SIONS to	C d, D f	Pattyconda	C e	R.	
Nizampatam	C b	Paugtoor	B e	Ranchol	C b
NOURGAL	B o	Paumoor	C g	Rachore, or Rychore	B e
Noyel R.	G c	Paungul	B f	Rachoutree	D f
Nundycoonda	B g	Payen-Gaut. The tract be- low the Gaults, or Table Land.	E e	Raibaugh	B c
Nurgoonal	C c	Pedda Balabaram	E c	Rajapour	B z
Nyarpet	E g	Pedda-Balapour	E c	Rajapilla	D e
O.		Peddinaigue. Between Am- boor and Vesatigheri.	E g	Ramanadoorgam	C c
Olinda Pais	D g	Pedro Pt.	I h	Ramanadapooram	I g
Oiloor	D h	Pelicaree	H d	Ramanchery	B g
Omelloor	I e	Pendarty	C h	Ramas, Cape	C b
Ongole	C g	Pennar R.	D h	Rameepatam	C b
Onore	D b	Penuonda	D e	Rameesaram	D f
Oodeadurgam	F f	Petentory	G e	Ramgaut	C b
Oodimally	H t	Periapatam	F d	Ramgiry	F e
Oespetta	C d	Periapatam	I g	Ramgiry	H d
Ooterawoody	H c	Periapollam	E h	Ramisram L.	I g
Ottampaliam	I e	Periacullam	H e	Rammautpour	F d
valley of	ib.	Permacoll	F g	Rampour	D g
Ootatore	G f	Permutty	G i	Ramtabad	D g
Oucara	G e	Perperengarde	G c	Ranny Bednore	D c
Ouscotta	H c	Perour	D e	Rary	C e
Oufsoor	F c	Petapoly	C h	Rato	D e
P.		Pettacotta	H g	Rivetmellore	G g
Pachespollam	G e	Pigeon I.	D b	Rettinghery	D e
Fahvitram	G f	Fillee	F g	Ryoor	B h
Pairumbaukum	E g	Pinagra	F f	Romaneah	E h
Palamcota (Tinevelly) J K e	K e	Podalicour	D g	ROYDROOG	D d
Palamcota. About mid- way between Chillumbrum and Warriore	G g	Polipet	E g	Roydroog	D d
Palamnaire	E f	Pelore	F g	Rutmaghery	A z
Palupetty	H f	Ponaron	G g	Ryacota	F f
Palatchy	H e	Ponda	C b	RYCHOOR, or RACHORE	B c
Palgatchery, or Palicand	H d	Pondichery	G g	Rychoor, or Rachore	B c
Paliecur	I h	Poodeaud	H d	Rymabad	E f
Paliar R.	F h	Poodicherrum Gaut	F c	S.	
Palicand, or Palgatchery	H d	Pooducotta	H f	Sackeraghiry	H e
Paliconda	F g	Poolareddy	B g	Sacrapatam	E d
Palimverdy	I f	Poolytopu	K e	Sairgaipilla	D f
		Pounamalee	E h	SALEM	G f
		Porcah	I d	Salem	ib.
		Pormumella	C g	Samissuram	D g
		Portonovo	G g	SAMORIN. The Calicut	
		Poudagoody	H f		
		Puducotta	H f		

	G g	Y.	Z.
Warriore	F c		
Wasura	D f	Yaldoorty	C e
Wempilly	G f	Yedacotta	H e
Wombinellore	E f	Yetcherlapand	C z
Wontamita	D b		Zyghur, or Jyeghur A z
Woodycotry			

ERRATA.

Page 6, line 3, read, *are*.

8, line 4, a comma after *distance*.

15, read, *Allputna*.

10, line 17, read, or *Raibaugh*.

12, Notes, line 3 from bottom, read, N. W by N from *Tudemeri*.

32. The two last lines of the Notes, are transposed, and partly jumbled together. Read, *Total of the Cessions, about 39½ lacs of pagodas : so that Tippoo's whole Revenue, &c.*

33, line 2, read *sufficient*.



11/4

~~201
201(P)~~

"A book that is shut is but a block"

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